

| Chromosome | Traits  | Position in the Quail map (cM) | Model | Reference giving physical coordinates of putative nearest markers in Chicken map, assuming synteny between both maps. | Reference giving physical coordinates of putative Flanking Markers in Chicken map, assuming synteny between both maps. |
|------------|---------|--------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| CJA1       | HeadNO  | 132                            | S+D   | BW: [1-3]; AFEgg: [4]                                                                                                 |                                                                                                                        |
|            | WEgg    | 193                            | S     | BW: [5]                                                                                                               |                                                                                                                        |
|            | AgrP    | 236                            | S     | BW: [1, 6] ; RCFP: [7, 8]                                                                                             | LCall: [9]                                                                                                             |
|            | DistSR  | 281                            | S+D   | BW: [1, 2, 6, 10]                                                                                                     |                                                                                                                        |
|            | W65     | 317                            | S+D   | BW: [2, 3, 11-13]                                                                                                     |                                                                                                                        |
|            | W17     | 319                            | S     | BW: [2, 3, 10-13]                                                                                                     | BW: [14, 15]; NO: [16]                                                                                                 |
|            | W17     | 325                            | S+D   | BW: [2, 3, 10-15]; NO: [16]                                                                                           | BW: [15, 17]                                                                                                           |
| CJA2       | AgrP    | 141                            | S     | FP: [18]                                                                                                              |                                                                                                                        |
|            | DistSR  | 149                            | S+D   | BW: [2, 19]; GentleP: [18]                                                                                            |                                                                                                                        |
|            | DistSR  | 155                            | S     | BW: [2, 19]                                                                                                           |                                                                                                                        |
|            | DistIso | 319                            | S     | BW: [20]                                                                                                              | BW: [1, 4]                                                                                                             |
| CJA3       | WEgg    | 156                            | S+D   | BW: [10, 12, 20, 21]; AFEgg: [4]; WEGG: [5]                                                                           |                                                                                                                        |
|            | W65     | 156                            | S     | BW: [10, 12, 20, 21]; AFEgg: [4]; WEGG: [5]                                                                           |                                                                                                                        |
|            | NEgg    | 225                            | S     | BW: [1, 20]                                                                                                           |                                                                                                                        |
|            | AFEgg   | 302                            | S     |                                                                                                                       |                                                                                                                        |
| CJA4       | DistIso | 105                            | S+D   | BW: [2]                                                                                                               | WEgg: [22-24]                                                                                                          |
| CJA5       | W17     | 54                             | S     | BW: [10, 24]                                                                                                          |                                                                                                                        |
|            | TI      | 59                             | S     | BW:[10, 11, 20]; WEgg: [23]                                                                                           |                                                                                                                        |
|            | W65     | 88                             | S+D   | BW: [10, 12, 25]                                                                                                      |                                                                                                                        |
|            | W17     | 90                             | S+D   | BW: [10, 20, 25]                                                                                                      | BW: [12]                                                                                                               |
|            | W65     | 97                             | S     | BW: [20, 25]                                                                                                          |                                                                                                                        |
| CJA7       | DistIso | 96                             | S+D   |                                                                                                                       |                                                                                                                        |
| CJA8       | W17     | 41                             | S+D   | BW: [3, 11]                                                                                                           |                                                                                                                        |
|            | W17     | 56                             | S     | BW: [1, 3]                                                                                                            |                                                                                                                        |
|            | HeadNO  | 65                             | S     | BW: [1, 3]                                                                                                            |                                                                                                                        |
| CJA9       | DistSR  | 42                             | S+D   | BW: [26]                                                                                                              |                                                                                                                        |
|            | DistSR  | 55                             | S     |                                                                                                                       | BW: [26]                                                                                                               |
| CJA10      | DistIso | 11                             | S+D   |                                                                                                                       |                                                                                                                        |
|            | W65     | 21                             | S+D   |                                                                                                                       |                                                                                                                        |
|            | W17     | 30                             | S+D   |                                                                                                                       |                                                                                                                        |
| CJA11      | TI      | 1                              | S+D   | BW: [1]; FreqDef: [9]                                                                                                 |                                                                                                                        |
|            | TI      | 5                              | S     | FreqDef: [9]                                                                                                          | BW: [1, 27]                                                                                                            |
|            | DistSR  | 47                             | S     |                                                                                                                       | BW: [10]                                                                                                               |
| CJA13      | DistSR  | 4                              | S     | BW-AFEgg: [4]                                                                                                         |                                                                                                                        |
| CJA15      | DistIso | 63                             | S     |                                                                                                                       |                                                                                                                        |

|       |         |    |     |          |  |
|-------|---------|----|-----|----------|--|
| CJA18 | NEgg    | 3  | S+D | BW: [19] |  |
|       | W65     | 18 | S+D |          |  |
|       | W65     | 42 | S   |          |  |
|       | WEgg    | 61 | S   |          |  |
|       | WEgg    | 62 | S+D |          |  |
| CJA19 | AFEgg   | 4  | S+D |          |  |
|       | DistIso | 8  | S+D |          |  |
|       | DistIso | 14 | S   |          |  |
| CJA23 | HeadNO  | 57 | S   |          |  |
| CJA26 | DistSR  | 21 | S   |          |  |

### Additional Table 1 – QTL physical comparisons between Quail and Chicken.

Legend: **BW**: QTL linked to body-weight traits; **AFEgg**: QTL linked to the Age at First Egg; **WEgg**: QTL linked to egg-weight traits; **FreqDef**: QTL linked to the frequency of defecation during an Open-Field test; **LCall**: Latency to emit calls during an Open-Field test; **LTW**: QTL linked to the latency to walk during an Open-Field Test; **RCFP**: QTL linked to receiving feather pecks; **FP**: QTL linked to the number of feather pecks given; **GentleP**: QTL linked to the number of gentle feather pecks given ; **NO**: QTL linked to the reaction at a novel object.

## References

1. Podisi BK, Knott SA, Burt DW, Hocking PM: **Comparative analysis of quantitative trait loci for body weight, growth rate and growth curve parameters from 3 to 72 weeks of age in female chickens of a broiler-layer cross.** *BMC Genet* 2013, **14**:11.
2. Carlborg R, Hocking PM, Burt DW, Haley CS: **Simultaneous mapping of epistatic QTL in chickens reveals clusters of QTL pairs with similar genetic effects on growth.** *Genet Res* 2004, **83**:197-209.
3. SWEggaleam A, Morrice DM, Law A, Windsor D, Haley CS, Ikeobi CON, Burt DW, Hocking PM: **Mapping of quantitative trait loci for body weight at three, six, and nine weeks of age in a broiler layer cross.** *Poultry Science* 2002, **81**:1775-1781.
4. Podisi BK, Knott SA, Dunn IC, Law AS, Burt DW, Hocking PM: **Overlap of quantitative trait loci for early growth rate, and for body weight and age at onset of sexual maturity in chickens.** *Reproduction* 2011, **141**:381-389.
5. Tuiskula-Haavisto M, De Koning DJ, Honkatukia M, Schulman NF, Maki-Tanila A, Vilkkii J: **Quantitative trait loci with parent-of-origin effects in chicken.** *Genet Res* 2004, **84**:57-66.
6. Rao Y, Shen X, Xia M, Luo C, Nie Q, Zhang D, Zhang X: **SNP mapping of QTL affecting growth and fatness on chicken GGA1.** *Genetics Selection Evolution* 2007, **39**:569-582.
7. Buitenhuis AJ, Rodenburg TB, Siwek M, Cornelissen SJB, Nieuwland MGB, Crooijmans R, Groenen MAM, Koene P, Bovenhuis H, van der Poel JJ: **Identification of quantitative trait loci for receiving pecks in young and adult laying hens.** *Poultry Science* 2003, **82**:1661-1667.
8. Biscarini F, Bovenhuis H, van Arendonk JAM, Parmentier HK, Jungerius AP, van der Poel JJ: **Across-line SNP association study of innate and adaptive immune response in laying hens.** *Animal Genetics* 2010, **41**:26-38.
9. Buitenhuis AJ, Rodenburg TB, Siwek M, Cornelissen SJB, Nieuwland MGB, Crooijmans R, Groenen MAM, Koene P, Bovenhuis H, van der Poel JJ: **Identification of QTLs involved in open-field behavior in young and adult laying hens.** *Behav Genet* 2004, **34**:325-333.
10. Carlborg O, Kerje S, Schutz K, Jacobsson L, Jensen P, Andersson L: **A global search reveals epistatic interaction between QTL for early growth in the chicken.** *Genome Res* 2003, **13**:413-421.
11. Kerje S, Carlborg O, Jacobsson L, Schutz K, Hartmann C, Jensen P, Andersson L: **The twofold difference in adult size between the red junglefowl and White Leghorn chickens is largely explained by a limited number of QTLs.** *Animal Genetics* 2003, **34**:264-274.
12. Jacobsson L, Park HB, Wahlberg P, Fredriksson R, Perez-Enciso M, Siegel PB, Andersson L: **Many QTLs with minor additive effects are associated with a large difference in growth between two selection lines in chickens.** *Genet Res* 2005, **86**:115-125.
13. Liu X, Li H, Wang S, Hu X, Gao Y, Wang Q, Li N, Wang Y, Zhang H: **Mapping quantitative trait loci affecting body weight and abdominal fat weight on chicken chromosome one.** *Poultry Science* 2007, **86**:1084-1089.
14. Wright D, Rubin CJ, Barrio AM, Schutz K, Kerje S, Brandstrom H, Kindmark A, Jensen P, Andersson L: **The genetic architecture of domestication in the chicken: effects of pleiotropy and linkage.** *Mol Ecol* 2010, **19**:5140-5156.

15. Wahlberg P, Carlborg O, Foglio M, Tordoir X, Syvanen AC, Lathrop M, Gut IG, Siegel PB, Andersson L: **Genetic analysis of an F-2 intercross between two chicken lines divergently selected for body-weight.** *Bmc Genomics* 2009, **10**:13.
16. Schütz KE, Kerje S, Jacobsson L, Forkman B, Carlborg O, Andersson L, Jensen P: **Major growth QTLs in fowl are related to fearful behavior: possible genetic links between fear responses and production traits in a red junglefowl x White Leghorn intercross.** *Behav Gen* 2004, **34**:121-130.
17. Zhou H, Deeb N, Evock-Clover CM, Ashwell CM, Lamont SJ: **Genome-wide linkage analysis to identify chromosomal regions affecting phenotypic traits in the chicken. I. Growth and average daily gain.** *Poultry Science* 2006, **85**:1700-1711.
18. Buitenhuis AJ, Rodenburg TB, van Hierden YM, Siwek M, Cornelissen SJB, Nieuwland MGB, Crooijmans R, Groenen MAM, Koene P, Korte SM, et al: **Mapping quantitative trait loci affecting feather pecking behavior and stress response in laying hens.** *Poultry Science* 2003, **82**:1215-1222.
19. Ambo M, Moura A, Ledur MC, Pinto LFB, Baron EE, Ruy DC, Nones K, Campos RLR, Boschiero C, Burt DW, Coutinho LL: **Quantitative trait loci for performance traits in a broiler x layer cross.** *Animal Genetics* 2009, **40**:200-208.
20. Nadaf J, Pitel F, Gilbert H, Duclos MJ, Vignoles F, Beaumont C, Vignal A, Porter TE, Cogburn LA, Aggrey SE, et al: **QTL for several metabolic traits map to loci controlling growth and body composition in an F-2 intercross between high- and low-growth chicken lines.** *Physiol Genomics* 2009, **38**:241-249.
21. Ankra-Badu GA, Le Bihan-Duval E, Mignon-Grasteau S, Pitel F, Beaumont C, Duclos MJ, Simon J, Carre W, Porter TE, Vignal A, et al: **Mapping QTL for growth and shank traits in chickens divergently selected for high or low body weight.** *Animal Genetics* 2010, **41**:400-405.
22. Schreiweis MA, Hester PY, Moody DE: **Identification of quantitative trait loci associated with bone traits and body weight in an F2 resource population of chickens.** *Genetics Selection Evolution* 2005, **37**:677-698.
23. Goraga ZS, Nassar MK, Brockmann GA: **Quantitative trait loci segregating in crosses between NWEgg Hampshire and White Leghorn chicken lines: I. egg production traits.** *Animal Genetics* 2012, **43**:183-189.
24. Sasaki O, Odawara S, Takahashi H, Nirasawa K, Oyamada Y, Yamamoto R, Ishii K, Nagamine Y, Takeda H, Kobayashi E, Furukawa T: **Genetic mapping of quantitative trait loci affecting body weight, egg character and egg production in F2 intercross chickens.** *Animal Genetics* 2004, **35**:188-194.
25. Tercic D, Holcman A, Dovc P, Morrice DR, Burt DW, Hocking PM, Horvat S: **Identification of chromosomal regions associated with growth and carcass traits in an F-3 full sib intercross line originating from a cross of chicken lines divergently selected on body weight.** *Animal Genetics* 2009, **40**:743-748.
26. Siwek M, Cornelissen SJB, Buitenhuis AJ, Nieuwland MGB, Bovenhuis H, Crooijmans R, Groenen MAM, Parmentier HK, van der Poel JJ: **Quantitative trait loci for body weight in layers differ from quantitative trait loci specific for antibody responses to sheep red blood cells.** *Poultry Science* 2004, **83**:853-859.
27. Nassar MK, Goraga ZS, Brockmann GA: **Quantitative trait loci segregating in crosses between NWEgg Hampshire and White Leghorn chicken lines: II. Muscle weight and carcass composition.** *Animal Genetics* 2012, **43**:739-745.