**Table S6.** Assigned population membership representing inferred pedigree of 168 cacao clones from Ghana

|  |  |  |  |
| --- | --- | --- | --- |
| S/Na | Clone name | Cluster | Membership coefficient |
| 1 | CRG01/110 | Iquitos | 0.528 |
| 2 | CRG1018/102 | Amelonado-Trinitario-Nanay | 0.863 |
| 3 | CRG1018/107 | Amelonado-Trinitario-Nanay | 0.993 |
| 4 | CRG1019/101 | Amelonado-Trinitario-Nanay | 0.994 |
| 5 | CRG1019/109 | Amelonado-Trinitario-Nanay | 0.994 |
| 6 | CRG1019/110 | Amelonado-Trinitario-Nanay | 0.994 |
| 7 | CRG2024/101 | Amelonado-Trinitario-Nanay | 0.966 |
| 8 | CRG2024/401 | Iquitos | 0.815 |
| 9 | CRG2029/506 | Guiana-Marañón | 0.984 |
| 10 | CRG2029/508 | Guiana-Marañón | 0.911 |
| 11 | CRG6020/109 | Contamana-Purús | 0.746 |
| 12 | CRG6035/103 | Contamana-Purús | 0.987 |
| 13 | CRG6035/110 | Contamana-Purús | 0.993 |
| 14 | CRG8214/319 | Amelonado-Trinitario-Nanay | 0.535 |
| 15 | CRG8220/106 | Contamana-Purús | 0.766 |
| 16 | CRG8305/425 | Amelonado-Trinitario-Nanay | 0.643 |
| 17 | CRG8914/409 | Amelonado-Trinitario-Nanay | 0.988 |
| 18 | CRG9001/108 | Guiana-Marañón | 0.497 |
| 19 | CRG9006/109 | Guiana-Marañón | 0.664 |
| 20 | CRG1065 | Iquitos | 0.617 |
| 21 | CRG2001 | Guiana-Marañón | 0.954 |
| 22 | CRG2039 | Iquitos | 0.979 |
| 23 | CRG2044 | Guiana-Marañón | 0.364 |
| 24 | CRG2061 | Amelonado-Trinitario-Nanay | 0.580 |
| 25 | CRG2066 | Iquitos | 0.774 |
| 26 | CRG2067 | Contamana-Purús | 0.988 |
| 27 | CRG2068 | Contamana-Purús | 0.986 |
| 28 | CRG2069 | Amelonado-Trinitario-Nanay | 0.591 |
| 29 | CRG2072 | Contamana-Purús | 0.873 |
| 30 | CRG2093 | Guiana-Marañón | 0.953 |
| 31 | CRG2106 | Amelonado-Trinitario-Nanay | 0.450 |
| 32 | CRG2120 | Guiana-Marañón | 0.992 |
| 33 | CRG2241 | Contamana-Purús | 0.967 |
| 34 | CRG2242 | Guiana-Marañón | 0.649 |
| 35 | CRG2267 | Guiana-Marañón | 0.668 |
| 36 | K137\_19 | Contamana-Purús | 0.993 |
| 37 | K138\_14 | Contamana-Purús | 0.995 |
| 38 | K138\_7 | Contamana-Purús | 0.995 |
| 39 | K138\_8 | Contamana-Purús | 0.996 |
| 40 | K208\_10 | Contamana-Purús | 0.993 |
| 41 | K208\_13 | Contamana-Purús | 0.993 |
| 42 | K220\_11 | Contamana-Purús | 0.995 |
| 43 | K220\_19 | Contamana-Purús | 0.995 |
| 44 | K220\_3 | Contamana-Purús | 0.994 |
| 45 | K220\_8 | Contamana-Purús | 0.994 |
| 46 | K329\_19 | Iquitos | 0.735 |
| 47 | K335\_1 | Contamana-Purús | 0.996 |
| 48 | K335\_10 | Contamana-Purús | 0.995 |
| 49 | K335\_11 | Contamana-Purús | 0.995 |
| 50 | K335\_13 | Contamana-Purús | 0.995 |
| 51 | K335\_2 | Contamana-Purús | 0.995 |
| 52 | K335\_5 | Contamana-Purús | 0.995 |
| 53 | K335\_6 | Contamana-Purús | 0.994 |
| 54 | K335\_8 | Contamana-Purús | 0.995 |
| 55 | K338\_1 | Contamana-Purús | 0.974 |
| 56 | K338\_10 | Contamana-Purús | 0.871 |
| 57 | K338\_2 | Contamana-Purús | 0.779 |
| 58 | K338\_3 | Contamana-Purús | 0.878 |
| 59 | K338\_4 | Contamana-Purús | 0.851 |
| 60 | K338\_6 | Contamana-Purús | 0.991 |
| 61 | K338\_7 | Contamana-Purús | 0.900 |
| 62 | K338\_9 | Contamana-Purús | 0.992 |
| 63 | K408\_4 | Contamana-Purús | 0.995 |
| 64 | K408\_5 | Contamana-Purús | 0.995 |
| 65 | K410\_5 | Iquitos | 0.847 |
| 66 | K441\_10 | Contamana-Purús | 0.995 |
| 67 | K441\_12 | Contamana-Purús | 0.995 |
| 68 | K441\_13 | Contamana-Purús | 0.995 |
| 69 | K441\_14 | Contamana-Purús | 0.995 |
| 70 | K441\_15 | Contamana-Purús | 0.994 |
| 71 | K441\_16 | Contamana-Purús | 0.994 |
| 72 | K441\_17 | Contamana-Purús | 0.995 |
| 73 | K441\_20 | Contamana-Purús | 0.995 |
| 74 | K441\_3 | Contamana-Purús | 0.994 |
| 75 | K441\_6 | Contamana-Purús | 0.994 |
| 76 | K441\_7 | Contamana-Purús | 0.995 |
| 77 | K441\_9 | Contamana-Purús | 0.995 |
| 78 | PA150\_GU175 | Guiana-Marañón | 0.502 |
| 79 | PA175\_PA150 | Guiana-Marañón | 0.455 |
| 80 | PA7\_GU125C | Guiana-Marañón | 0.992 |
| 81 | PA7\_GU341 | Guiana-Marañón | 0.990 |
| 82 | RIM41\_T60 | Iquitos | 0.306 |
| 83 | T60\_GU341 | Guiana-Marañón | 0.976 |
| 84 | CRG0134/209 | Amelonado-Trinitario-Nanay | 0.958 |
| 85 | CRG0228/105 | Iquitos | 0.501 |
| 86 | CRG0312/113 | Contamana-Purús | 0.383 |
| 87 | CRG 0333/101 | Guiana-Marañón | 0.985 |
| 88 | CRG0333/105 | Guiana-Marañón | 0.400 |
| 89 | CRG0338/412 | Guiana-Marañón | 0.857 |
| 90 | CRG0347/413 | Guiana-Marañón | 0.971 |
| 91 | CRG0537/305 | Contamana-Purús | 0.855 |
| 92 | CRG1018/2 | Amelonado-Trinitario-Nanay | 0.994 |
| 93 | CRG2029\_EQX78 | Guiana-Marañón | 0.352 |
| 94 | CRG8914\_PA7A | Amelonado-Trinitario-Nanay | 0.776 |
| 95 | CRG8914\_PA7B | Amelonado-Trinitario-Nanay | 0.566 |
| 96 | CRG9001/103 | Iquitos | 0.606 |
| 97 | CRG9001/107 | Amelonado-Trinitario-Nanay | 0.525 |
| 98 | CRG9006\_T17/524A | Iquitos | 0.974 |
| 99 | CRG9006\_T17/524B | Iquitos | 0.826 |
| 100 | CRG9006\_T17/524C | Iquitos | 0.968 |
| 101 | CRG9006\_T17/524D | Iquitos | 0.856 |
| 102 | CRG9006\_T17/524E | Iquitos | 0.902 |
| 103 | CRG9006\_T17/524F | Contamana-Purús | 0.995 |
| 104 | CRG9006\_T17/524G | Iquitos | 0.987 |
| 105 | CRG9006\_T17/524H | Contamana-Purús | 0.995 |
| 106 | CRG9006\_T17/524I | Iquitos | 0.831 |
| 107 | GU144C\_EQX78A | Guiana-Marañón | 0.363 |
| 108 | GU144C\_EQX78B | Guiana-Marañón | 0.984 |
| 109 | GU144C\_EQX78C | Guiana-Marañón | 0.992 |
| 110 | GU144C\_EQX78D | Guiana-Marañón | 0.988 |
| 111 | GU144C\_EQX78E | Guiana-Marañón | 0.984 |
| 112 | GU144C\_EQX78F | Guiana-Marañón | 0.991 |
| 113 | GU144C\_EQX78G | Guiana-Marañón | 0.992 |
| 114 | GU144C\_EQX78H | Guiana-Marañón | 0.988 |
| 115 | GU144C\_EQX78I | Guiana-Marañón | 0.992 |
| 116 | GU144C\_EQX78J | Guiana-Marañón | 0.986 |
| 117 | GU144C\_EQX78K | Guiana-Marañón | 0.716 |
| 118 | GU144C\_EQX78L | Guiana-Marañón | 0.976 |
| 119 | GU144C\_EQX78M | Guiana-Marañón | 0.985 |
| 120 | GU144C\_EQX78N | Guiana-Marañón | 0.991 |
| 121 | GU144C\_EQX78O | Guiana-Marañón | 0.993 |
| 122 | PA150\_C1018/102A | Amelonado-Trinitario-Nanay | 0.971 |
| 123 | PA150\_C1018/102B | Amelonado-Trinitario-Nanay | 0.990 |
| 124 | PA150\_C1018/102C | Amelonado-Trinitario-Nanay | 0.986 |
| 125 | PA150\_C1018/102D | Amelonado-Trinitario-Nanay | 0.985 |
| 126 | PA150\_C1018/102E | Amelonado-Trinitario-Nanay | 0.992 |
| 127 | PA150\_C1018/102F | Amelonado-Trinitario-Nanay | 0.987 |
| 128 | PA150\_C1018/102G | Guiana-Marañón | 0.990 |
| 129 | PA7\_A1/154A | Guiana-Marañón | 0.987 |
| 130 | PA7\_A1/154B | Guiana-Marañón | 0.989 |
| 131 | PA7\_C1018/102A | Amelonado-Trinitario-Nanay | 0.909 |
| 132 | PA7\_C1018/102B | Amelonado-Trinitario-Nanay | 0.966 |
| 133 | PA7\_C1018/102C | Amelonado-Trinitario-Nanay | 0.990 |
| 134 | PA7\_C1018/102D | Amelonado-Trinitario-Nanay | 0.811 |
| 135 | PA7\_CRG 8914A | Guiana-Marañón | 0.541 |
| 136 | PA7\_CRG 8914B | Guiana-Marañón | 0.981 |
| 137 | PA7\_CRG 8914C | Guiana-Marañón | 0.510 |
| 138 | PA7\_CRG 8914D | Amelonado-Trinitario-Nanay | 0.540 |
| 139 | PA7\_CRG/T12A | Iquitos | 0.985 |
| 140 | PA7\_CRG/T12B | Iquitos | 0.982 |
| 141 | PA7\_CRG/T12C | Iquitos | 0.985 |
| 142 | PA7\_CRG/T17A | Iquitos | 0.985 |
| 143 | PA7\_CRG/T17B | Iquitos | 0.539 |
| 144 | PA7\_CRG/T17C | Iquitos | 0.742 |
| 145 | PA7\_CRG/T19 | Iquitos | 0.988 |
| 146 | PA7\_CRG/T24A | Iquitos | 0.981 |
| 147 | PA7\_CRG/T24B | Iquitos | 0.989 |
| 148 | PA7\_EQX78 | Contamana-Purús | 0.572 |
| 149 | PA7\_Pound10A | Guiana-Marañón | 0.731 |
| 150 | PA7\_Pound10B | Guiana-Marañón | 0.991 |
| 151 | T23 | Iquitos | 0.338 |
| 152 | T24 | Amelonado-Trinitario-Nanay | 0.625 |
| 153 | T27 | Amelonado-Trinitario-Nanay | 0.960 |
| 154 | T36 | Iquitos | 0.519 |
| 155 | T40 | Amelonado-Trinitario-Nanay | 0.993 |
| 156 | T48 | Amelonado-Trinitario-Nanay | 0.663 |
| 157 | T49 | Amelonado-Trinitario-Nanay | 0.533 |
| 158 | T50 | Amelonado-Trinitario-Nanay | 0.798 |
| 159 | T57 | Guiana-Marañón | 0.511 |
| 160 | T59 | Amelonado-Trinitario-Nanay | 0.657 |
| 161 | T60/887\_PA150A | Guiana-Marañón | 0.781 |
| 162 | T60/887\_PA150B | Guiana-Marañón | 0.949 |
| 163 | T60/887\_PA150C | Guiana-Marañón | 0.907 |
| 164 | T63/967\_PA7A | Guiana-Marañón | 0.993 |
| 165 | T63/967\_PA7B | Guiana-Marañón | 0.937 |
| 166 | T63/967\_PA7C | Guiana-Marañón | 0.947 |
| 167 | T69 | Iquitos | 0.958 |
| 168 | T79/501\_CRG9006 | Guiana-Marañón | 0.808 |

a Follows the same serial number for clones used for PCoA