Table S1. Passport information of the 337 germplasm lines with successful marker amplification

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Accession name | | | Country of origin | | | | | | Region | | | | | Cluster | | | | | Accession name | | | | Country of origin | | | | | Region | | | | Cluster | | | | |
| Unknown | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal (millet) | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Unknown | | | Uganda | | | | | | Eastern | | | | | 1C | | | | | Kal (millet) | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Purple | | | Uganda | | | | | | Eastern | | | | | 1C | | | | | Unknown | | | | Uganda | | | | | Western | | | | 2D | | | | |
| Ekama | | | Uganda | | | | | | Eastern | | | | | 1C | | | | | Otim cherigar/ceruget | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Ebega | | | Uganda | | | | | | Eastern | | | | | 1C | | | | | Kal Lango | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Engenyi | | | Uganda | | | | | | Eastern | | | | | 2B | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Ekama | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Cirogal | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Emoru | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Oturi Aweri | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Emiroit/Engeny | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Turi-open | | | | Uganda | | | | | Northern | | | | 2B | | | | |
| Emaru | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Turi-closed | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Etiyo-brown | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Etiyo-White | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Emiroit | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2C | | | | |
| Emorumoru (rock) | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Bulk market | | | | Uganda | | | | | Northern | | | | 2C | | | | |
| Obeet | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Bulk market | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Unknown | | | Uganda | | | | | | Western | | | | | 2A | | | | | Fama atar | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Etiyo | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Acomomcomo | | | Uganda | | | | | | Eastern | | | | | 1A | | | | | Kal-white | | | | Uganda | | | | | Northern | | | | 2B | | | | |
| Eteke | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal-purple | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Ochom | | | Uganda | | | | | | Eastern | | | | | 2B | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Emodigoit | | | Uganda | | | | | | Eastern | | | | | 2B | | | | | Kal | | | | Uganda | | | | | Northern | | | | 1C | | | | |
| Unknown | | | Uganda | | | | | | Eastern | | | | | 2B | | | | | Kal | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Namakala | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal atari | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Tanzakira | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal atari | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Lowa | | | Uganda | | | | | | Eastern | | | | | 2A | | | | | Kal atari | | | | Uganda | | | | | Northern | | | | 2A | | | | |
| Ekwangapel | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Ekamo | | | | Uganda | | | | | Eastern | | | | 2D | | | | |
| Emiroit/unknown | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Unknown | | | | Uganda | | | | | Eastern | | | | 2D | | | | |
| Ekama-white | | | Uganda | | | | | | Eastern | | | | | 2B | | | | | Gulu E | | | | Uganda | | | | | Northern | | | | 2D | | | | |
| Adalaka | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Anyandri | | | | Uganda | | | | | Northern | | | | 2B | | | | |
| Ekama | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Unknown | | | | Uganda | | | | | Western | | | | 2B | | | | |
| Ebati | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Unknown | | | | Uganda | | | | | Western | | | | 2B | | | | |
| Omunga | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Unknown | | | | Uganda | | | | | Western | | | | 2B | | | | |
| Emiroit | | | Uganda | | | | | | Eastern | | | | | 2B | | | | | Bulo | | | | Uganda | | | | | Western | | | | 2B | | | | |
| Otunduru | | | Uganda | | | | | | Eastern | | | | | 2C | | | | | Bulo | | | | Uganda | | | | | Western | | | | 2B | | | | |
| Kal (millet) | | | Uganda | | | | | | Northern | | | | | 2D | | | | | Bulo | | | | Uganda | | | | | Western | | | | 2A | | | | |
| Kal (millet) | | | Uganda | | | | | | Northern | | | | | 2C | | | | | Bulo | | | | Uganda | | | | | Western | | | | 2A | | | | |
| Kal (millet) | | | Uganda | | | | | | Northern | | | | | 2D | | | | | Bulo | | | | Uganda | | | | | Western | | | | 2B | | | | |
|  | | | |  | |  | | | | |  | | | | | |  | | | |  | | | | |  | | | | |  | | | | |
| Accession name | | | | | Country of origin | | | | | Region | | | | | Cluster | | | | | Accession name | | | | | Country of origin | | | | | Region | | | | | Cluster | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 3 | | | | | GBK-000405A | | | | | Kenya | | | | | Western | | | | | 1A | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2B | | | | | GBK-000410A | | | | | Kenya | | | | | Western | | | | | 3 | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2B | | | | | GBK-000415A | | | | | Kenya | | | | | Western | | | | | 3 | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2D | | | | | GBK-000584A | | | | | Kenya | | | | | Eastern | | | | | 2C | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2D | | | | | GBK-000587A | | | | | Kenya | | | | | Eastern | | | | | 2B | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2D | | | | | GBK-000590A | | | | | Kenya | | | | | Eastern | | | | | 1B | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2B | | | | | GBK-000591A | | | | | Kenya | | | | | Eastern | | | | | 2A | | | | |
| Unknown | | | | | Uganda | | | | | Western | | | | | 2B | | | | | GBK-000592A | | | | | Kenya | | | | | Eastern | | | | | 2B | | | | |
| Otara chilgal | | | | | Uganda | | | | | Northern | | | | | 2B | | | | | GBK-000594A | | | | | Kenya | | | | | Eastern | | | | | 2A | | | | |
| Otara chilgal | | | | | Uganda | | | | | Northern | | | | | 2B | | | | | GBK-000596A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| Otara chilgal | | | | | Uganda | | | | | Northern | | | | | 2A | | | | | GBK-000597A | | | | | Kenya | | | | | Eastern | | | | | 2A | | | | |
| Otara chilgal | | | | | Uganda | | | | | Northern | | | | | 2B | | | | | GBK-000599A | | | | | Kenya | | | | | Eastern | | | | | 2A | | | | |
| Otara chilgal | | | | | Uganda | | | | | Northern | | | | | 2B | | | | | GBK-008277A | | | | | Kenya | | | | | Western | | | | | 2B | | | | |
| Kal | | | | | Uganda | | | | | Northern | | | | | 2B | | | | | GBK-008278A | | | | | Kenya | | | | | Western | | | | | 2A | | | | |
| Kal | | | | | Uganda | | | | | Northern | | | | | 2B | | | | | GBK-008279A | | | | | Kenya | | | | | Western | | | | | 2B | | | | |
| Kal | | | | | Uganda | | | | | Northern | | | | | 2A | | | | | GBK-008280A | | | | | Kenya | | | | | Western | | | | | 2D | | | | |
| Kal | | | | | Uganda | | | | | Northern | | | | | 2A | | | | | GBK-008281A | | | | | Kenya | | | | | Western | | | | | 2C | | | | |
| Obeet | | | | | Uganda | | | | | Eastern | | | | | 2B | | | | | GBK-008301A | | | | | Kenya | | | | | Western | | | | | 2B | | | | |
| Ekoma-Okwa  (IE 6555) | | | | | Uganda | | | | | Eastern | | | | | 2B | | | | | GBK-008321A | | | | | Kenya | | | | | Western | | | | | 2D | | | | |
| Rwemereza (IE 6591) | | | | | Uganda | | | | | Eastern | | | | | 2D | | | | | GBK-008328A | | | | | Kenya | | | | | Western | | | | | 2D | | | | |
| Oburo (IE 6592) | | | | | Uganda | | | | | Eastern | | | | | 2B | | | | | GBK-008329A | | | | | Kenya | | | | | Western | | | | | 2D | | | | |
| RW 127 (IE 6613) | | | | | Uganda | | | | | Eastern | | | | | 1A | | | | | GBK-008336A | | | | | Kenya | | | | | Western | | | | | 2D | | | | |
| GBK-000347A | | | | | Kenya | | | | | Rift valley | | | | | 2C | | | | | GBK-008352A | | | | | Kenya | | | | | Western | | | | | 2A | | | | |
| GBK-000349A | | | | | Kenya | | | | | Rift valley | | | | | 2D | | | | | GBK-008365A | | | | | Kenya | | | | | Western | | | | | 2B | | | | |
| GBK-000350A | | | | | Kenya | | | | | Rift valley | | | | | 2D | | | | | GBK-011107A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000351A | | | | | Kenya | | | | | Rift valley | | | | | 2D | | | | | GBK-011109A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000352A | | | | | Kenya | | | | | Rift valley | | | | | 2C | | | | | GBK-011110A | | | | | Kenya | | | | | Eastern | | | | | 1C | | | | |
| GBK-000361A | | | | | Kenya | | | | | Rift valley | | | | | 2D | | | | | GBK-011111A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000364A | | | | | Kenya | | | | | Rift valley | | | | | 1C | | | | | GBK-011112A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000368A | | | | | Kenya | | | | | Rift valley | | | | | 2C | | | | | GBK-011113A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000369A | | | | | Kenya | | | | | Rift valley | | | | | 3 | | | | | GBK-011114A | | | | | Kenya | | | | | Eastern | | | | | 2A | | | | |
| GBK-000370A | | | | | Kenya | | | | | Rift valley | | | | | 2B | | | | | GBK-011116A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000371A | | | | | Kenya | | | | | Rift valley | | | | | 2B | | | | | GBK-011117A | | | | | Kenya | | | | | Eastern | | | | | 2B | | | | |
| GBK-000372A | | | | | Kenya | | | | | Rift valley | | | | | 2B | | | | | GBK-011118A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000373A | | | | | Kenya | | | | | Rift valley | | | | | 2B | | | | | GBK-011119A | | | | | Kenya | | | | | Eastern | | | | | 2B | | | | |
| GBK-000375A | | | | | Kenya | | | | | Rift valley | | | | | 2B | | | | | GBK-011120A | | | | | Kenya | | | | | Eastern | | | | | 2C | | | | |
| GBK-000379A | | | | | Kenya | | | | | Rift valley | | | | | 3 | | | | | GBK-011129A | | | | | Kenya | | | | | Eastern | | | | | 2D | | | | |
| GBK-000399A | | | | | Kenya | | | | | Western | | | | | 2B | | | | | GBK-011130A | | | | | Kenya | | | | | Eastern | | | | | 2B | | | | |
|  | | | |  | |  | | | | |  | | | | | |  | | | |  | | | | |  | | | | |  | | | | |
| Accession name | | Country of origin | | | | | | Region | | | | | Cluster | | | | | Accession name | | | | Country of origin | | | | | Region | | | | | | | Cluster | | | |
| GBK-011131A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029664A | | | | Kenya | | | | | Western | | | | | | | 1C | | | |
| GBK-011133A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029666A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-011134A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029667A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-011135A | | Kenya | | | | | | Eastern | | | | | 2C | | | | | GBK-029668A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-011137A | | Kenya | | | | | | Eastern | | | | | 2B | | | | | GBK-029670A | | | | Kenya | | | | | Western | | | | | | | 2D | | | |
| GBK-011138A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029672A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-011139A | | Kenya | | | | | | Eastern | | | | | 2A | | | | | GBK-029673A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-011141A | | Kenya | | | | | | Eastern | | | | | 2C | | | | | GBK-029674A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-013126A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029676A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-013139A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029677A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-013144A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029678A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-013161A | | Kenya | | | | | | Eastern | | | | | 2B | | | | | GBK-029679A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-013183A | | Kenya | | | | | | Eastern | | | | | 2D | | | | | GBK-029680A | | | | Kenya | | | | | Western | | | | | | | 1C | | | |
| GBK-027127A | | Kenya | | | | | | Rift valley | | | | | 2B | | | | | GBK-029681A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-027128A | | Kenya | | | | | | Rift valley | | | | | 1C | | | | | GBK-029682A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-027130A | | Kenya | | | | | | Rift valley | | | | | 2D | | | | | GBK-029754A | | | | Kenya | | | | | Western | | | | | | | 1B | | | |
| GBK-027133A | | Kenya | | | | | | Rift valley | | | | | 2D | | | | | GBK-029755A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-027134A | | Kenya | | | | | | Rift valley | | | | | 2D | | | | | GBK-029756A | | | | Kenya | | | | | Western | | | | | | | 1C | | | |
| GBK-027135A | | Kenya | | | | | | Rift valley | | | | | 2D | | | | | GBK-029758A | | | | Kenya | | | | | Western | | | | | | | 1C | | | |
| GBK-027141A | | Kenya | | | | | | Rift valley | | | | | 2C | | | | | GBK-029763A | | | | Kenya | | | | | Western | | | | | | | 1C | | | |
| GBK-027145A | | Kenya | | | | | | Rift valley | | | | | 1C | | | | | GBK-029766A | | | | Kenya | | | | | Western | | | | | | | 2B | | | |
| GBK-027149A | | Kenya | | | | | | Rift valley | | | | | 2C | | | | | GBK-029767A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-027155A | | Kenya | | | | | | Rift valley | | | | | 2C | | | | | GBK-029768A | | | | Kenya | | | | | Western | | | | | | | 2A | | | |
| GBK-027158A | | Kenya | | | | | | Rift valley | | | | | 2C | | | | | GBK-029769A | | | | Kenya | | | | | Western | | | | | | | 1A | | | |
| GBK-027165A | | Kenya | | | | | | Rift valley | | | | | 2C | | | | | GBK-040436A | | | | Kenya | | | | | Rift valley | | | | | | | 1A | | | |
| Ikhulule | | Kenya | | | | | | Western | | | | | 2D | | | | | GBK-040459A | | | | Kenya | | | | | Rift valley | | | | | | | 1A | | | |
| GBK-027185A | | Kenya | | | | | | Rift valley | | | | | 2B | | | | | GBK-040463A | | | | Kenya | | | | | Rift valley | | | | | | | 1A | | | |
| GBK-027189A | | Kenya | | | | | | Rift valley | | | | | 2B | | | | | GBK-040468A | | | | Kenya | | | | | Rift valley | | | | | | | 1C | | | |
| GBK-027193A | | Kenya | | | | | | Rift valley | | | | | 3 | | | | | GBK-040555A | | | | Kenya | | | | | Rift valley | | | | | | | 1A | | | |
| GBK-027194A | | Kenya | | | | | | Rift valley | | | | | 3 | | | | | GBK-040556A | | | | Kenya | | | | | Rift valley | | | | | | | 1C | | | |
| GBK-027200A | | Kenya | | | | | | Rift valley | | | | | 3 | | | | | GBK-040559A | | | | Kenya | | | | | Rift valley | | | | | | | 1C | | | |
| GBK-027201A | | Kenya | | | | | | Rift valley | | | | | 3 | | | | | GBK-040568A | | | | Kenya | | | | | Rift valley | | | | | | | 1C | | | |
| GBK-028546A | | Kenya | | | | | | Western | | | | | 1A | | | | | GBK-040569A | | | | Kenya | | | | | Rift valley | | | | | | | 1C | | | |
| GBK-028588A | | Kenya | | | | | | Western | | | | | 2C | | | | | IE 2457 | | | | Kenya | | | | | Minicore | | | | | | | 1B | | | |
| GBK-028589A | | Kenya | | | | | | Western | | | | | 1A | | | | | IE 2872 | | | | Zambia | | | | | Minicore | | | | | | | 1B | | | |
| GBK-028590A | | Kenya | | | | | | Western | | | | | 1A | | | | | IE 2911 | | | | Zambia | | | | | Minicore | | | | | | | 1B | | | |
| GBK-029646A | | Kenya | | | | | | Western | | | | | 1B | | | | | IE 3475 | | | | India | | | | | Minicore | | | | | | | 2D | | | |
| GBK-029648A | | Kenya | | | | | | Western | | | | | 1A | | | | | IE 3952 | | | | Uganda | | | | | Minicore | | | | | | | 1A | | | |
| GBK-029650A | | Kenya | | | | | | Western | | | | | 1B | | | | | IE 3973 | | | | Uganda | | | | | Minicore | | | | | | | 1C | | | |
| GBK-029663A | | Kenya | | | | | | Western | | | | | 1A | | | | | IE 4028 | | | | Uganda | | | | | Minicore | | | | | | | 1C | | | |
| Accession name | Country of origin | | | | | | Region | | | | | Cluster | | | | Accession name | | | | | | | | Country of origin | | | | | Region | | | | Cluster | | | | | |  | |  |  |  |
| IE 4121 | Uganda | | | | | | Minicore | | | | | 1C | | | | Acc # 3924 | | | | | | | | Tanzania | | | | | Northern | | | | 2A | | | | | |  | |  |  |  |
| IE 4545 | Zimbabwe | | | | | | Minicore | | | | | 2C | | | | Acc # 3927 | | | | | | | | Tanzania | | | | | Northern | | | | 1A | | | | | |  | |  |  |  |
| IE 4570 | Zimbabwe | | | | | | Minicore | | | | | 2C | | | | Acc # 3944 | | | | | | | | Tanzania | | | | | Northern | | | | 1A | | | | | |  | |  |  |  |
| IE 4622 | Zimbabwe | | | | | | Minicore | | | | | 1B | | | | Acc # 3953 | | | | | | | | Tanzania | | | | | Northern | | | | 1B | | | | | |  | |  |  |  |
| IE 4816 | India | | | | | | Minicore | | | | | 2D | | | | Acc # 3960 | | | | | | | | Tanzania | | | | | Northern | | | | 1A | | | | | |  | |  |  |  |
| IE 5367 | Kenya | | | | | | Minicore | | | | | 2B | | | | Acc # 3962 | | | | | | | | Tanzania | | | | | Northern | | | | 1A | | | | | |  | |  |  |  |
| IE 6165 | Nepal | | | | | | Minicore | | | | | 2D | | | | Acc # 3989 | | | | | | | | Tanzania | | | | | Northern | | | | 1C | | | | | |  | |  |  |  |
| IE 6533 | Nigeria | | | | | | Minicore | | | | | 2C | | | | Acc # 3995 | | | | | | | | Tanzania | | | | | Northern | | | | 3 | | | | | |  | |  |  |  |
| Acc # 2292 | Tanzania | | | | | | Southern | | | | | 1A | | | | Acc # 4225 | | | | | | | | Tanzania | | | | | Western | | | | 3 | | | | | |  | |  |  |  |
| Acc # 2361 | Tanzania | | | | | | Southern | | | | | 1A | | | | Acc # 4263 | | | | | | | | Tanzania | | | | | Western | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2369 | Tanzania | | | | | | Southern | | | | | 1A | | | | Kahulunge | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2457 | Tanzania | | | | | | Southern | | | | | 1A | | | | Sansamula | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2502 | Tanzania | | | | | | Southern | | | | | 1C | | | | unknown | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2706 | Tanzania | | | | | | Eastern | | | | | 1C | | | | Chikufi | | | | | | | | Tanzania | | | | | Southern | | | | 2C | | | | | |  | |  |  |  |
| Acc # 2720 | Tanzania | | | | | | Eastern | | | | | 1C | | | | Nameka | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2879 | Tanzania | | | | | | Southern | | | | | 3 | | | | Ngumi | | | | | | | | Tanzania | | | | | Southern | | | | 1B | | | | | |  | |  |  |  |
| Acc # 2920 | Tanzania | | | | | | Southern | | | | | 3 | | | | Kaulunge (Ngumi) | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2924 | Tanzania | | | | | | Southern | | | | | 2C | | | | Katila | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2954 | Tanzania | | | | | | Southern | | | | | 1B | | | | Kauhulunge | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2968 | Tanzania | | | | | | Southern | | | | | 1A | | | | Chikwekwele | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2974 | Tanzania | | | | | | Southern | | | | | 2C | | | | Kaulunge (Makazi) | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 2999 | Tanzania | | | | | | Southern | | | | | 1C | | | | Kafumbata | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 3016 | Tanzania | | | | | | Southern | | | | | 1C | | | | Sansamula | | | | | | | | Tanzania | | | | | Southern | | | | 1B | | | | | |  | |  |  |  |
| Acc # 3027 | Tanzania | | | | | | Southern | | | | | 1A | | | | Kafumbata/Kaulunge | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 3030 | Tanzania | | | | | | Southern | | | | | 1A | | | | Sansamula | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 3040 | Tanzania | | | | | | Southern | | | | | 1C | | | | Kaulunge | | | | | | | | Tanzania | | | | | Southern | | | | 1C | | | | | |  | |  |  |  |
| Acc # 3063 | Tanzania | | | | | | Southern | | | | | 1A | | | | Unkown | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 3081 | Tanzania | | | | | | Southern | | | | | 1A | | | | Kafumbata | | | | | | | | Tanzania | | | | | Southern | | | | 1C | | | | | |  | |  |  |  |
| Acc # 3114 | Tanzania | | | | | | Western | | | | | 1B | | | | Kaulunge | | | | | | | | Tanzania | | | | | Southern | | | | 2C | | | | | |  | |  |  |  |
| Acc # 3135 | Tanzania | | | | | | Western | | | | | 1B | | | | Namakonta | | | | | | | | Tanzania | | | | | Southern | | | | 1A | | | | | |  | |  |  |  |
| Acc # 3163 | Tanzania | | | | | | Western | | | | | 1B | | | | Magasi | | | | | | | | Tanzania | | | | | Southern | | | | 2C | | | | | |  | |  |  |  |
| Acc # 3574 | Tanzania | | | | | | Western | | | | | 2B | | | | Katila | | | | | | | | Tanzania | | | | | Southern | | | | 2C | | | | | |  | |  |  |  |
| Acc # 3656 | Tanzania | | | | | | Southern | | | | | 1C | | | | Magas/Kaulunge | | | | | | | | Tanzania | | | | | Southern | | | | 2C | | | | | |  | |  |  |  |
| Acc # 3849 | Tanzania | | | | | | Southern | | | | | 1A | | | | Katila | | | | | | | | Tanzania | | | | | Southern | | | | 2D | | | | | |  | |  |  |  |
| Acc # 3865 | Tanzania | | | | | | Southern | | | | | 2C | | | | Kaulunge | | | | | | | | Tanzania | | | | | Southern | | | | 3 | | | | | |  | |  |  |  |
| Acc # 3902 | Tanzania | | | | | | Southern | | | | | 1A | | | | Naupule/Ng'ombe mix | | | | | | | | Tanzania | | | | | Southern | | | | 1C | | | | | |  | |  |  |  |
| Acc # 3910 | Tanzania | | | | | | Southern | | | | | 1C | | | | Ng'ombe | | | | | | | | Tanzania | | | | | Southern | | | | 2D | | | | | |  | |  |  |  |
| Acc # 3919 | Tanzania | | | | | | Northern | | | | | 2A | | | | Katila | | | | | | | | Tanzania | | | | | Southern | | | | 3 | | | | | |  | |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Accession name | Country of origin | Region | Cluster |
| Nameka | Tanzania | Southern | 1A |
| Mautila | Tanzania | Southern | 1A |
| Anguumi | Tanzania | Southern | 1A |
| Mautila (white) | Tanzania | Southern | 3 |
| Solila | Tanzania | Southern | 3 |
| Katila | Tanzania | Southern | 3 |
| Ng'ombe | Tanzania | Southern | 3 |
| IEL 6 | ICRISAT | Check | 3 |
| KNE 479 | ICRISAT | Check | 3 |
| IE 11 | ICRISAT | Check | 3 |
| VL 520 | ICRISAT | Check | 2A |
| IE 2522 | ICRISAT | Check | 2B |
| IE 2285 | ICRISAT | Check | 1C |
| KAT FM 1 | Kenya | Check | 1C |
| KNE 755 | ICRISAT | Check | 1B |
| Acc # 100007 | Ethiopia | Check | 1C |
| KNE 744 | ICRISAT | Check | 1A |
| KNE 1124 | ICRISAT | Check | 1C |
| KNE 741 | ICRISAT | Check | 1C |
| KNE 689 | ICRISAT | Check | 1A |
| P 224 | Uganda | Check | 1C |
| KNE 814 | ICRISAT | Check | 1C |
| KNE 796 | ICRISAT | Check | 1B |
| KNE 1149 | ICRISAT | Check | 1B |
| KNE 392 | ICRISAT | Check | 1B |
| Okhale 1 | Kenya | Check | 2D |
| KNE 620 | ICRISAT | Check | 1C |
| KNE 1034 | ICRISAT | Check | 2C |
| Nanjala brown | Kenya | Check | 1C |
| IE 1012 | ICRISAT | Check | 2A |
| Okhale 1 | Kenya | Check | 2D |

Table S2. AMOVA for between and within country and sub-regions variability of finger millet accessions obtained from three east African countries

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AMOVA | | | | | | | | | | |
| Countries | | | |  | Sub-regions | | | | | |
| Source of variation | Sum of squares | Variance components | Percentage variation |  | Source of variation | Sum  of squares | Variance components | Percentage variation |  |  |
| Between countries | 214.440 | 0.358 | 5.434 |  | Between  sub-regions | 263.920 | 0.299 | 4.916 |  |  |
| Within countries | 3675.390 | 5.010 | 76.033 |  | Within  sub-regions | 3063.559 | 4.490 | 73.681 |  |  |
| Within accessions | 406.500 | 1.221 | 18.533 |  | Within accessions | 405.000 | 1.304 | 21.403 |  |  |
| Total | 4296.332 | 6.590 |  |  | Total | 3738.479 | 6.094 |  |  |  |