Table S2. The International Union for the Protection of New Varieties of Plants (UPOV) descriptors used for morphological characterization of onion bulbs

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| S/N | Bulb characteristics | Designation | Descriptions |
| 1 | | Tendency to split into bulblets (with dry skin around each bulblet) | TSB | (1) Absent or very weak, (3) Weak, (5) Medium, (7) Strong, (9) Very strong |
| 2 | Degree to split into bulblets (with dry skin around each bulblet) | DSB | (1) Absent or very weak, (3) Weak, (5) Medium, (7) Strong, (9) Very strong |
| 3 | Bulb size | BZE | (3) Small, (5) Medium, (7) Large |
| 4 | Position of Maximum Diameter of Bulb | BPMD | (1) Towards stem end, (5) At middle, (7) Towards stem end |
| 5 | Width of Neck | BNW | (1) Very narrow, (3) Narrow, (5) Medium, (7) Broad, (9) Very broad |
| 6 | Shape (in longitudinal section | BSH | (1) Elliptic, (2) Medium ovate, (3) Broad elliptic, (4) Circular, (5) Broad ovate, (6) Broad obovate, (7) Rhombic, (8) Transverse medium elliptic, (9) Transverse narrow elliptic |
| 7 | Shape of Stem End | SSE | (1) Depressed, (2) Flat, (3) Slightly raised, (4) Rounded, (5) Slightly sloping, (6) Strongly sloping |
| 8 | Shape at Root End | SRE | (1) Depressed, (2) Flat, (3) Rounded, (4) Weakly tapered, (5) Strongly tapered |
| 9 | Base Color of Dry Skin | BCDS | (1) White, (2) Grey, (3) Green, (4) Yellow, (5) Brown, (6) Pink, (7) Red |
| 10 | Hue of Color of Dry Skin | HCDS | (1) Absent, (2) Greyish, (3) Greenish, (4) Yellowish, (5) Brownish, (6) Pinkish, (7) Reddish (8) Purplish |