

**Table S2 Pairwise correlation coefficients of sesame seed coat color traits under two environments**

| Environment     | Trait     | L*      | a*      | b*      | L       | a       | b       | X       | Y       | Z |
|-----------------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---|
| <b>Hainan</b>   | <b>L*</b> | 1       |         |         |         |         |         |         |         |   |
|                 | <b>a*</b> | 0.776** | 1       |         |         |         |         |         |         |   |
|                 | <b>b*</b> | 0.925** | 0.901** | 1       |         |         |         |         |         |   |
|                 | <b>L</b>  | 0.999** | 0.762** | 0.914** | 1       |         |         |         |         |   |
|                 | <b>a</b>  | 0.825** | 0.993** | 0.920** | 0.814** | 1       |         |         |         |   |
|                 | <b>b</b>  | 0.960** | 0.878** | 0.993** | 0.954** | 0.909** | 1       |         |         |   |
|                 | <b>X</b>  | 0.984** | 0.732** | 0.884** | 0.991** | 0.793** | 0.933** | 1       |         |   |
|                 | <b>Y</b>  | 0.982** | 0.708** | 0.873** | 0.990** | 0.771** | 0.924** | 0.999** | 1       |   |
|                 | <b>Z</b>  | 0.953** | 0.599** | 0.780** | 0.963** | 0.667** | 0.845** | 0.975** | 0.982** | 1 |
| <b>Yuanyang</b> | <b>L*</b> | 1       |         |         |         |         |         |         |         |   |
|                 | <b>a*</b> | 0.593** | 1       |         |         |         |         |         |         |   |
|                 | <b>b*</b> | 0.918** | 0.803** | 1       |         |         |         |         |         |   |
|                 | <b>L</b>  | 0.999** | 0.584** | 0.911** | 1       |         |         |         |         |   |
|                 | <b>a</b>  | 0.675** | 0.992** | 0.850** | 0.668** | 1       |         |         |         |   |
|                 | <b>b</b>  | 0.955** | 0.760** | 0.993** | 0.951** | 0.819** | 1       |         |         |   |
|                 | <b>X</b>  | 0.985** | 0.586** | 0.896** | 0.991** | 0.675** | 0.941** | 1       |         |   |
|                 | <b>Y</b>  | 0.984** | 0.549** | 0.881** | 0.991** | 0.639** | 0.930** | 0.999** | 1       |   |
|                 | <b>Z</b>  | 0.960** | 0.410** | 0.784** | 0.968** | 0.508** | 0.849** | 0.971** | 0.980** | 1 |

\*Significant at  $P \leq 0.05$ ; \*\*Significant at  $P \leq 0.01$ .