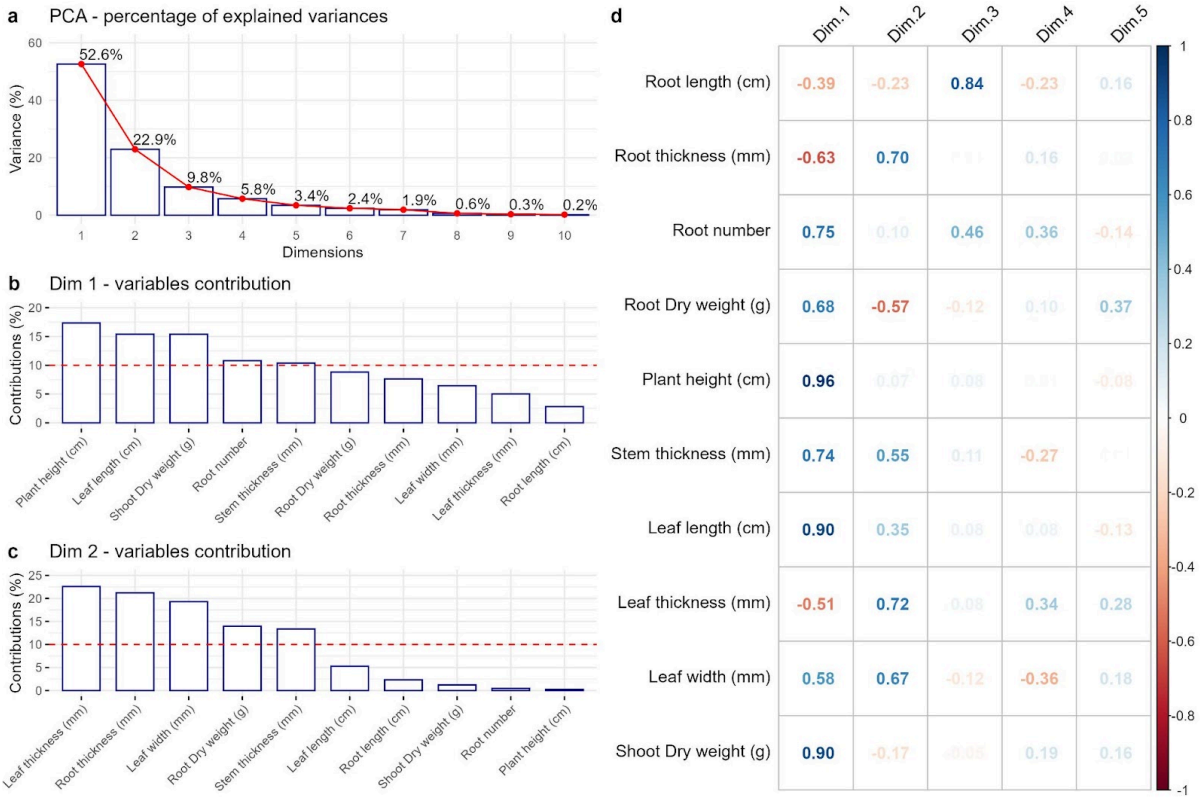
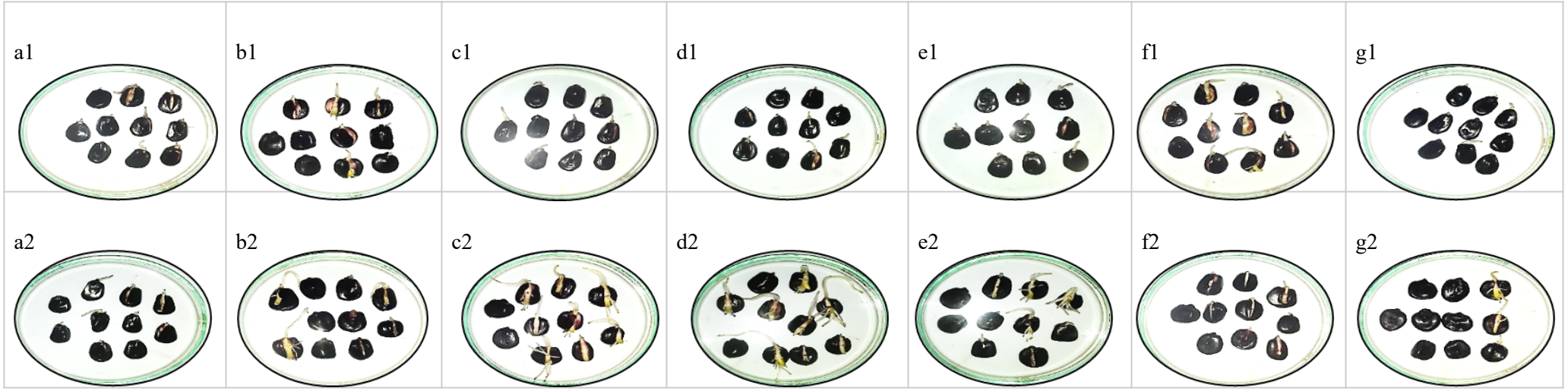
**SUPPLEMENTARY MATERIAL**

**Supplementary Figure 1.** Principal Component Analysis (PCA) of the biometric traits of purple maize seedlings from two varieties, the creole and the hybrid PMV 581. Results of the contributions and correlation of the variables in the analysis: (a) Percentage of variance explained by each dimension, (b) Contribution of the studied variables to dimension 1, (c) Contribution of the studied variables to dimension 2, (d) Correlation between the studied variables and the dimensions that most contribute to the explanation of the variance.



**Supplementary Figure 2.** Evolution of seed germination for purple corn, variety Criollo and hybrid PMV 581, after 3 days of being subjected to different treatments. Seeds of Criollo variety: (a1) Distilled Water, (b1) Seaweed 1 L/200 L, (c1) Seaweed 1.5 L/200 L, (d1) Sulfur 100 g/200 L, (e1) Sulfur 150 g/200 L, (f1) Milk Whey 10% - 10 mL/90 mL, (g1) Milk Whey 30% - 30 mL/70 mL. Seeds of hybrid variety: (a2) Distilled Water, (b2) Seaweed 1 L/200 L, (c2) Seaweed 1.5 L/200 L, (d2) Sulfur 100 g/200 L, (e2) Sulfur 150 g/200 L, (f2) Milk Whey 10% - 10 mL/90 mL, (g2) Milk Whey 30% - 30 mL/70 mL. The seeds of the hybrid variety show higher germination and greater root development.



**Supplementary Figure 3.** The purple maize seedlings of the creole variety and hybrid PMV 581 were observed at 15 days after germination. A visual monitoring of the seedlings' development was conducted, focusing on roots, vigor, and size across different treatments. Seedlings of the criollo variety: (a1) Distilled Water, (b1) Seaweed 1 L/200 L, (c1) Seaweed 1.5 L/200 L, (d1) Sulfur 100 g/200 L, (e1) Sulfur 150 g/200 L, (f1) Milk Whey 10% - 10 mL/90 mL, (g1) Milk Whey 30% - 30 mL/70 mL. Seedlings of the hybrid variety: (a2) Distilled Water, (b2) Seaweed 1 L/200 L, (c2) Seaweed 1.5 L/200 L, (d2) Sulfur 100 g/200 L, (e2) Sulfur 150 g/200 L, (f2) Milk Whey 10% - 10 mL/90 mL, (g2) Milk Whey 30% - 30 mL/70 mL.