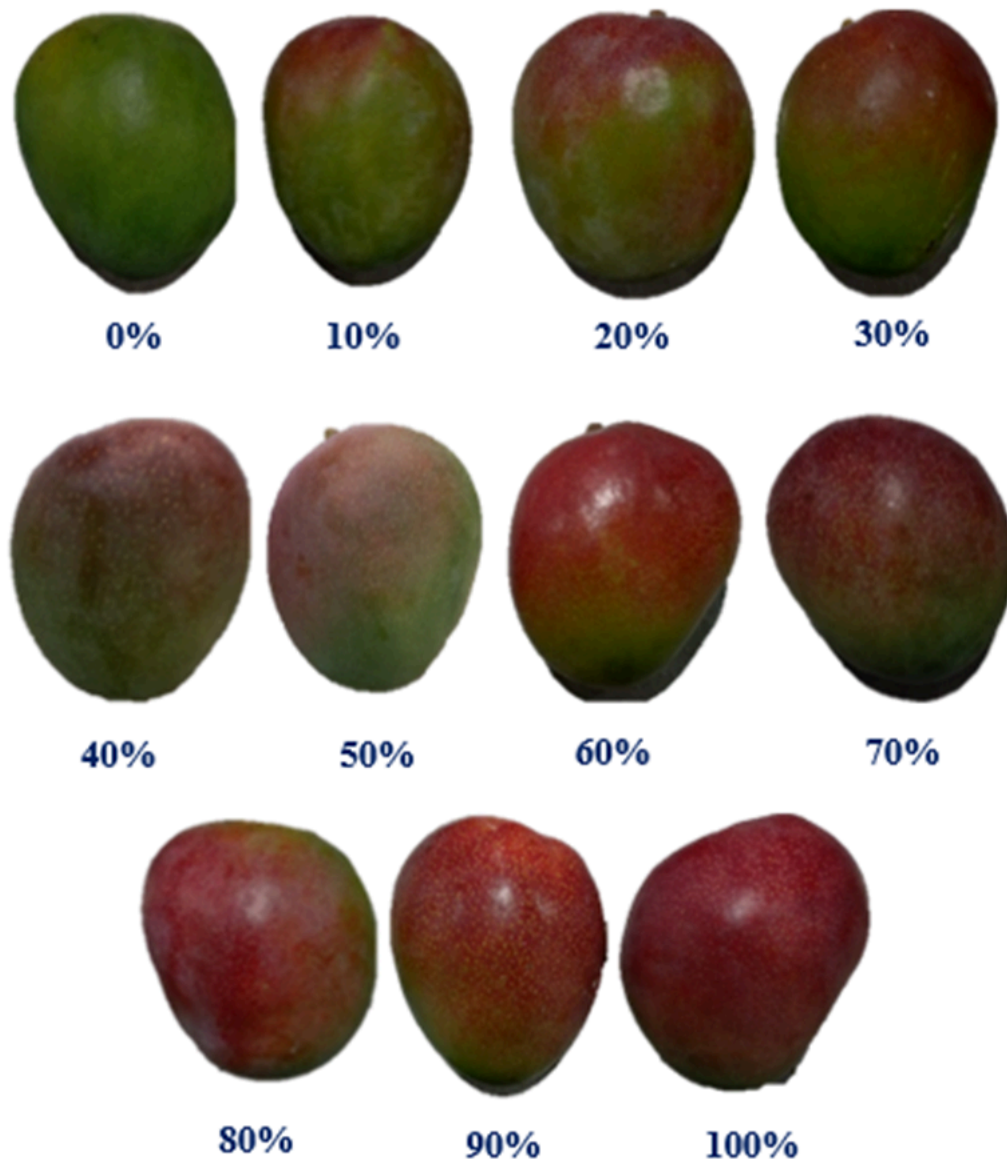


SUPPLEMENTARY MATERIAL

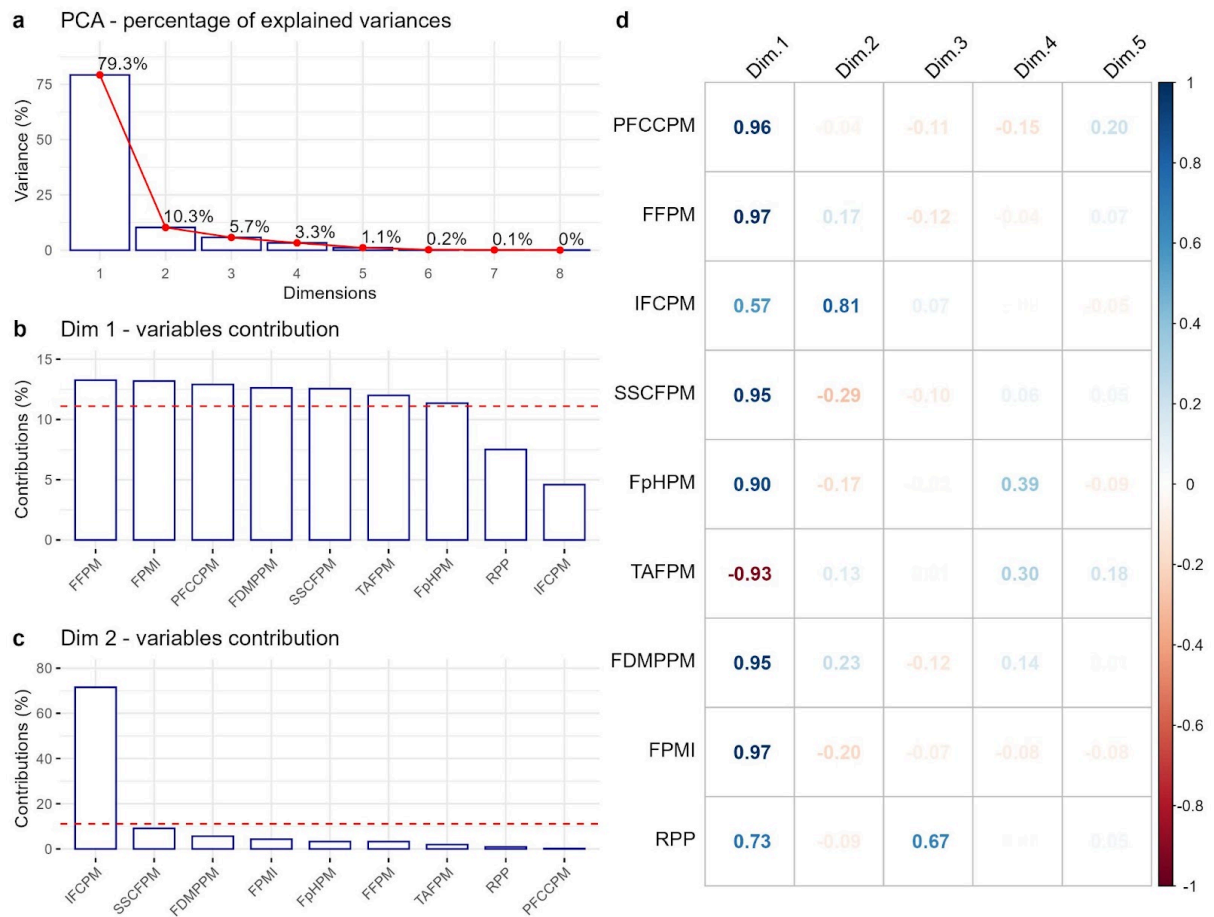
Supplementary Figure 1: Scale for percentage values of carotenoids, referred to as fruit blush, where 0% indicates the absence of carotenoids in the fruit, whereas values of 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, and 100% indicate the presence of carotenoids. These percentages are based on the portion of the mango fruit located between the ventral shoulder and the dorsal shoulder, with 100% referencing the total region located between the aforementioned parts.



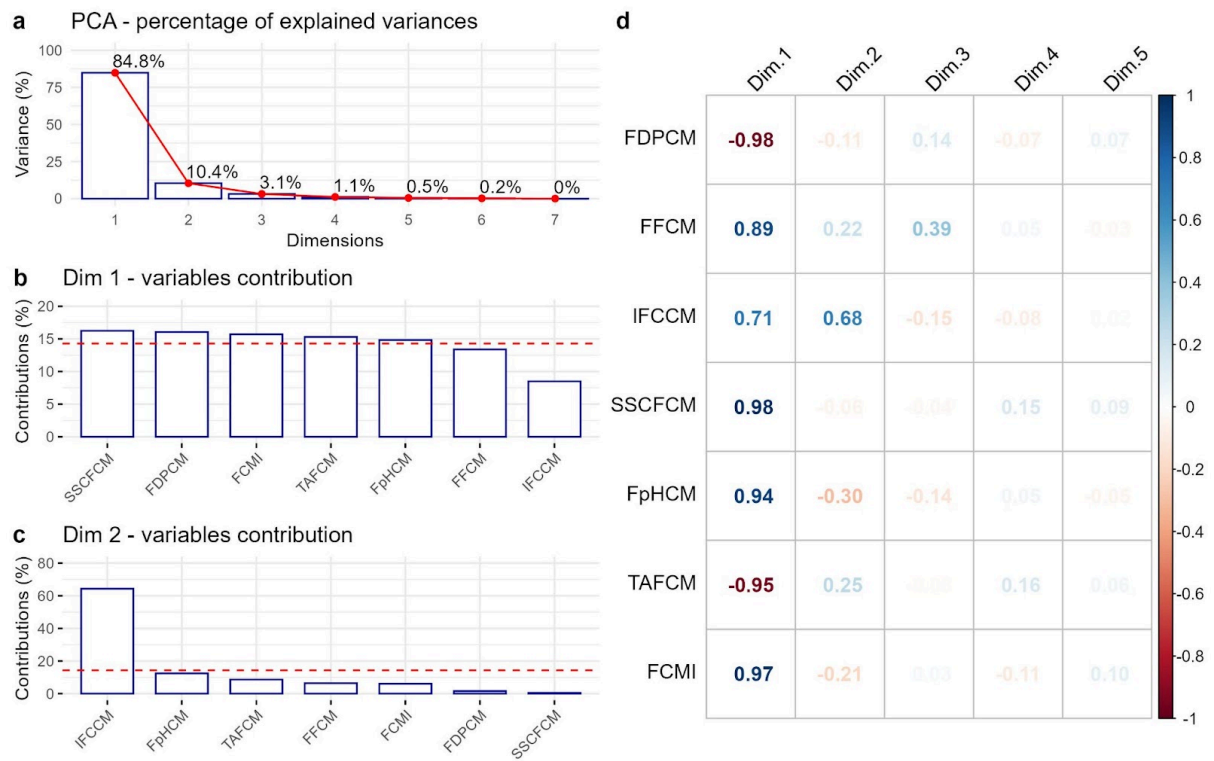
Supplementary Figure 2: Scale for values of the pulp color of ripe fruit when subjected to a longitudinal cut between the poles, where the values correspond to a specific color: 1.0 white and green, 1.5 green, 2.0 green and yellow, 2.5 yellow, 3.0 yellow-orange, 3.5 orange, and 4.0 deep orange.



Supplementary Figure 3: Principal component analysis (PCA) of quality traits for mango fruits at physiological maturity from compost and biol applications. Results of the contributions and correlation of 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 contribute most to the explanation of the variance.



Supplementary Figure 4: Principal component analysis (PCA) of the physicochemical traits to correlate with fruits at commercial maturity from compost and biol applications. Results of the contributions and correlation of 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) Correlations between the studied variables and the dimensions that contribute most to the explanation of the variance.



Supplementary Table 1: Values of the nutrients, substances, and properties of the Nutri Suelo 3M compost provided by Soluciones Orgánicas Loma Fértil, Peru in the product's technical data sheet.

Nutrients	Values
Nitrogen N(%)	2.09
Phosphorus P (%)	2.01
Potassium K (%)	2.56
Calcium Ca (%)	4.45
Magnesium Mg (%)	2.80
Silicon Si (%)	12.0
Sodium Na (%)	0.21
Iron Fe (%)	9.50
Copper Cu (ppm)	19.0
Zinc Zn (ppm)	77.0
Manganese Mn (ppm)	241.0
Boron B (ppm)	50.0
Substances	Values
Humic acids (%)	3.37
Fulvic acids (%)	2.79
Humic (%)	22.34
Organic matter (%)	28.50
Characteristics	Values
pH	7.0
Electrical conductivity (EC) (dS/m)	3.17
Cation exchange capacity (CEC) (meq/100 g soil)	35.0
C/N ratio	26/1