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Supplementary material

Potential Preharvest Application of γ-Aminobutyric Acid (GABA) on Improving Quality of 'Verna' Lemon at Harvest and during Storage

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Supplementary Table S1. Analyses of variance (ANOVA) of crop parameters (kg tree^{-1} and fruit number tree^{-1}) for different harvest dates (1st, 2nd and 3rd harvest) as according to 2 categories: commercial and waste in 'Verna' lemon using the treatment studied as the factor.[1]

Crop Parameters	¥ANOVA (F Value for treatment source)
Crop yield (kg tree^{-1}) for the 1st harvest	6.45**
Waste (kg tree^{-1}) for the 1st harvest	0.59 NS
Crop yield (kg tree^{-1}) for the 2nd harvest	14.94***
Waste (kg tree^{-1}) for the 2nd harvest	0.67 NS
Crop yield (kg tree^{-1}) for the 3rd harvest	0.25 NS
Waste (kg tree^{-1}) for the 3rd harvest	0.48 NS
Crop yield (fruit number tree^{-1}) for the 1st harvest	18.61***
Waste (fruit number tree^{-1}) for the 1st harvest	0.29 NS
Crop yield (fruit number tree^{-1}) for the 2nd harvest	9.82***
Waste (fruit number tree^{-1}) for the 2nd harvest	7.28**
Crop yield (fruit number tree^{-1}) for the 3rd harvest	0.12 NS
Waste (fruit number tree^{-1}) for the 3rd harvest	0.39 NS

[1] NS = not significant; *, ** and *** significant at $p < 0.05$, $p < 0.01$ and $p < 0.001$, respectively; data were previously tested for normality test.

Supplementary Table S2. Analyses of variance (ANOVA) of quality and functional parameters [weight loss, firmness, total phenolics in flavedo and juice and total antioxidant activity (TAA)] for different harvest dates (1st and 2nd harvest) in 'Verna' lemon during 28 days of storage + shelf-life at 2 temperatures (2 and 10 °C) using the treatment studied and storage time as the factors.[1]

Quality and Functional Parameters	ANOVA (F Value for treatment source)	ANOVA (F Value for storage time source)	ANOVA (F Value for interaction)
Weight loss for the 1st harvest at 2 °C	42.60***	1018.44***	7.04***
Weight loss for the 2nd harvest at 2 °C	69.82***	657.80***	7.32***
Weight loss for the 1st harvest at 10 °C	40.26***	1264.35***	7.37***
Weight loss for the 2nd harvest at 10 °C	22.95***	689.95***	3.90***
Firmness for the 1st harvest at 2 °C	60.77***	208.98***	1.02 NS
Firmness for the 2nd harvest at 2 °C	46.92***	38.49***	1.046 NS
Firmness for the 1st harvest at 10 °C	62.68***	161.27***	0.79 NS
Firmness for the 2nd harvest at 10 °C	47.53***	24.90***	1.13 NS
Total Phenolics flavedo for the 1st harvest at 2 °C	97.60***	47.52***	1.025 NS
Total Phenolics flavedo for the 2nd harvest at 2 °C	110.06***	6.32***	0.23 NS
Total Phenolics flavedo for the 1st harvest at 10 °C	28.12***	3.33*	0.08 NS
Total Phenolics flavedo for the 2nd harvest at 10°C	42.30***	0.50 NS	0.59 NS
Total Phenolics juice for the 1st harvest at 2 °C	96.02***	26.32***	0.65 NS
Total Phenolics juice for the 2nd harvest at 2 °C	54.71***	20.06***	0.20 NS
Total Phenolics juice for the 1st harvest at 10 °C	41.05***	3.35*	0.43 NS
Total Phenolics juice for the 2nd harvest at 10°C	12.98***	5.08***	2.65**
TAA for the 1st harvest at 2°C	63.81***	27.87***	0.41 NS
TAA for the 2nd harvest at 2°C	69.27***	35.12***	0.11 NS
TAA for the 1st harvest at 10°C	180.74***	16.78***	3.35***
TAA for the 2nd harvest at 10°C	7.36***	10.71***	5.67***

[1] NS = not significant; *, ** and *** significant at $p < 0.05$, $p < 0.01$ and $p < 0.001$, respectively; data were previously tested for normality test.