

Supplementary material Methods S1. Chemical composition of fertilizers used in the experimental procedure (Theofrastos company, Korinthos, Greece) and fertilization treatments applied in the pilot cultivation of *Sideritis syriaca* subsp. *syriaca* with other Cretan endemic plants at the premises of the Hellenic Mediterranean University

Scheme A. Integrated nutrient management (INM) by foliar application (INM-fa): The nutrient solution consisted of THEORUN at 7 ml L⁻¹, THEOCAL at 1.5 g L⁻¹, THEOFAST at 5 ml L⁻¹, 10-47-10 (AGRI.FE.M. LTD Fertilizers, Greece) at 3.2 g L⁻¹, K₂SO₄ (0-0-52, AGRI.FE.M. LTD Fertilizers, Greece) at 2.07 g L⁻¹, micronutrients (Plex Mix, AGRI.FE.M. LTD Fertilizers, Greece) at 1.5 ml L⁻¹ and MgSO₄ (Mg 25.6%, AGRI.FE.M. LTD Fertilizers, Greece) at 0.6 g L⁻¹.

Scheme B. Conventional inorganic fertilization by foliar application (ChF-fa): The nutrient solution consisted of NH₄NO₃ (34,4-0-0, Neofert®, Neochim PLC, Bulgaria) at 2.7 g L⁻¹, Ca(NO₃)₂ (NITROCAL, Agrohimiki, Greece) at 1.7 g L⁻¹, 10-47-10 at 3.2 g L⁻¹, K₂SO₄ (0-0-52) at 2.27 g L⁻¹, micronutrients Plex Mix at 1.5 ml L⁻¹ and MgSO₄ (Mg 25.6 %) at 0.6 g L⁻¹.

Scheme C. Control, with foliar and soil applications with tap water.

Scheme D. INM by soil application (INM-sa): The nutrient solution consisted of THEORUN at 7 ml L⁻¹, THEOCAL at 1.5 g L⁻¹, THEOMASS at 10 ml L⁻¹, 10-47-10 at 3.2 g L⁻¹, K₂SO₄ (0-0-52) at 2.1 g L⁻¹, micronutrients Plex Mix at 1.5 ml L⁻¹ and MgSO₄ (Mg 25.6 %) at 0.3 g L⁻¹.

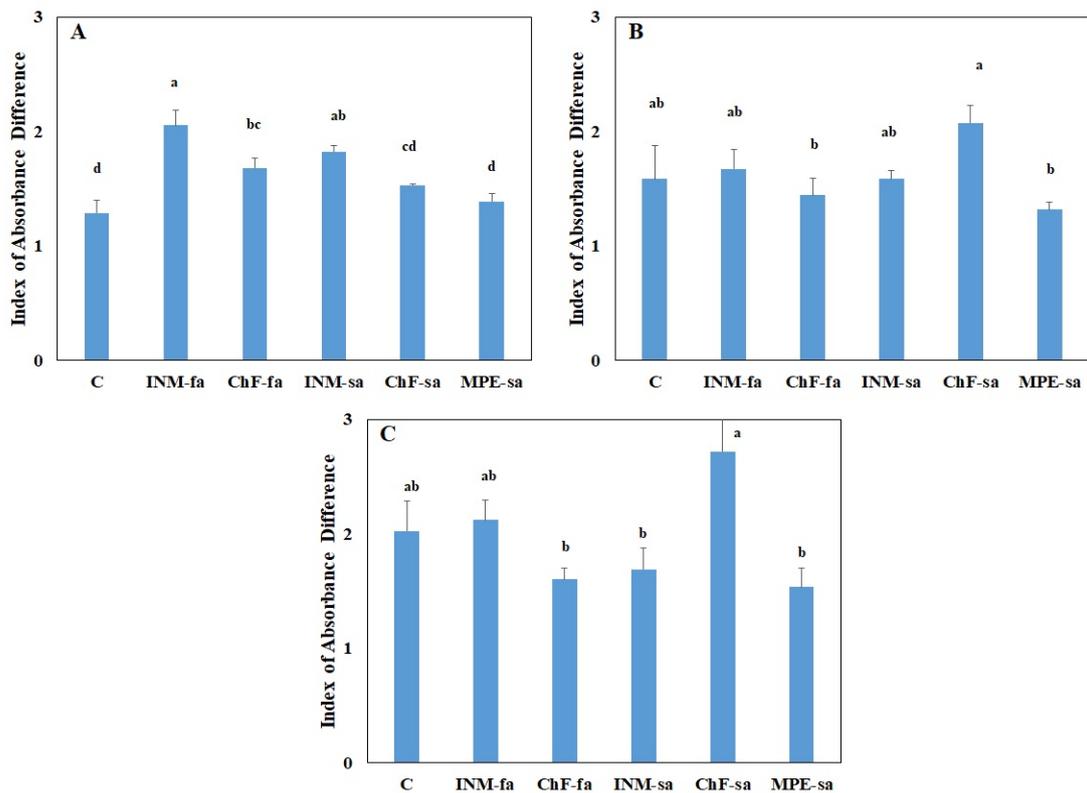
Scheme E. Conventional inorganic fertilization by soil application (ChF-sa): The nutrient solution was consisted of NH₄NO₃ (34,4-0-0) at 2.7 g L⁻¹, Ca(NO₃)₂ (NITROCAL) at 1.7 g L⁻¹, 10-47-10 at 3.2 g L⁻¹, K₂SO₄ (0-0-52) at 2.3 g L⁻¹, micronutrients, Plex Mix at 1.5 ml L⁻¹ and MgSO₄ (Mg 25.6 %) at 0.3 g L⁻¹.

Scheme F. Mixture of plant extracts as biostimulant by soil application (MPE-sa): The nutrient solution consisted of THEOMASS at 10 ml L⁻¹.

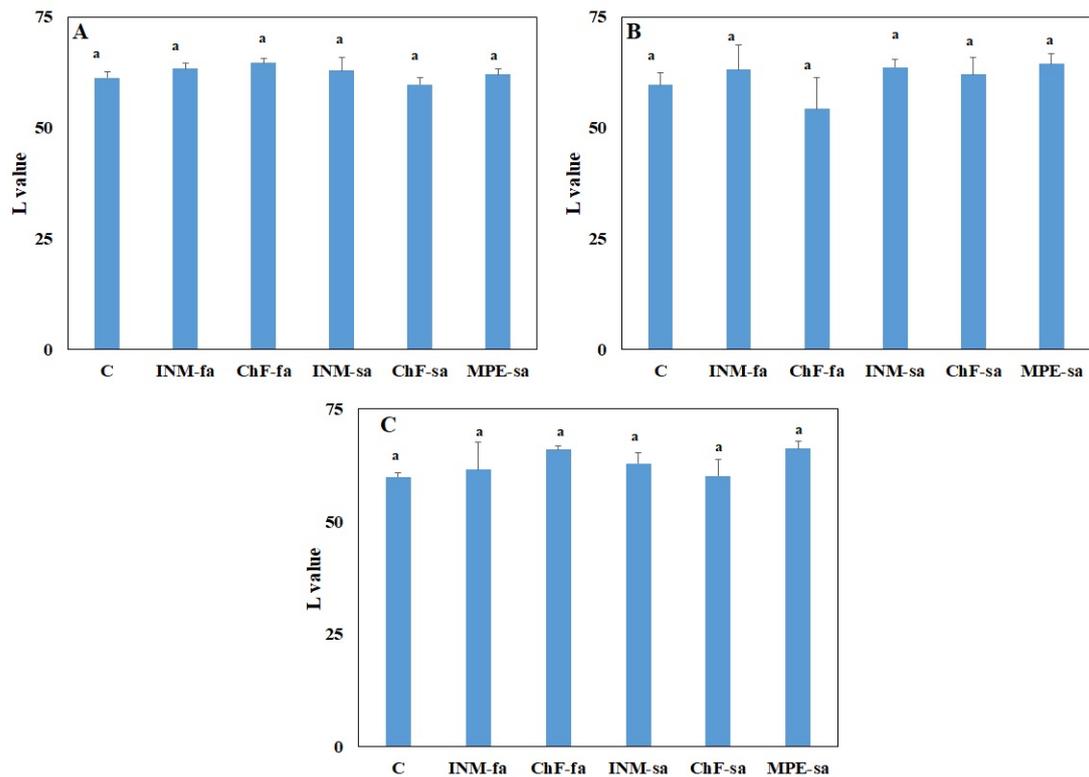
Supplementary Material Table S1. Alignment presenting the nucleotide differences among 15 *Sideritis* species based on the molecular plastid markers *rbcL* and *trnL/trnF*. Accession numbers of DNA sequences obtained in this study from the GenBank are indicated next to taxon names. The clade marked in orange represents *S. syriaca* subsp. *syriaca* GR-1-BBGK-15,5939 studied herein. The taxon marked with asterisk (*) is characterized as *S. syriaca* in the database, but based on the origin of the specimen, it should be identified as *S. euboica* due to the narrow distribution of *S. syriaca* in Crete.

Supplementary Material Table S2 Phylogenetic analysis of *Sideritis* taxa using the plastid molecular marker *rbcl*. Alignment of 20 *Sideritis* DNA sequences retrieved from GenBank compared to *Sideritis syriaca* subsp. *syriaca* GR-1-BBGK-15,5939 specimen of the current study (OP909056); the conserved areas (100%) are toggled.

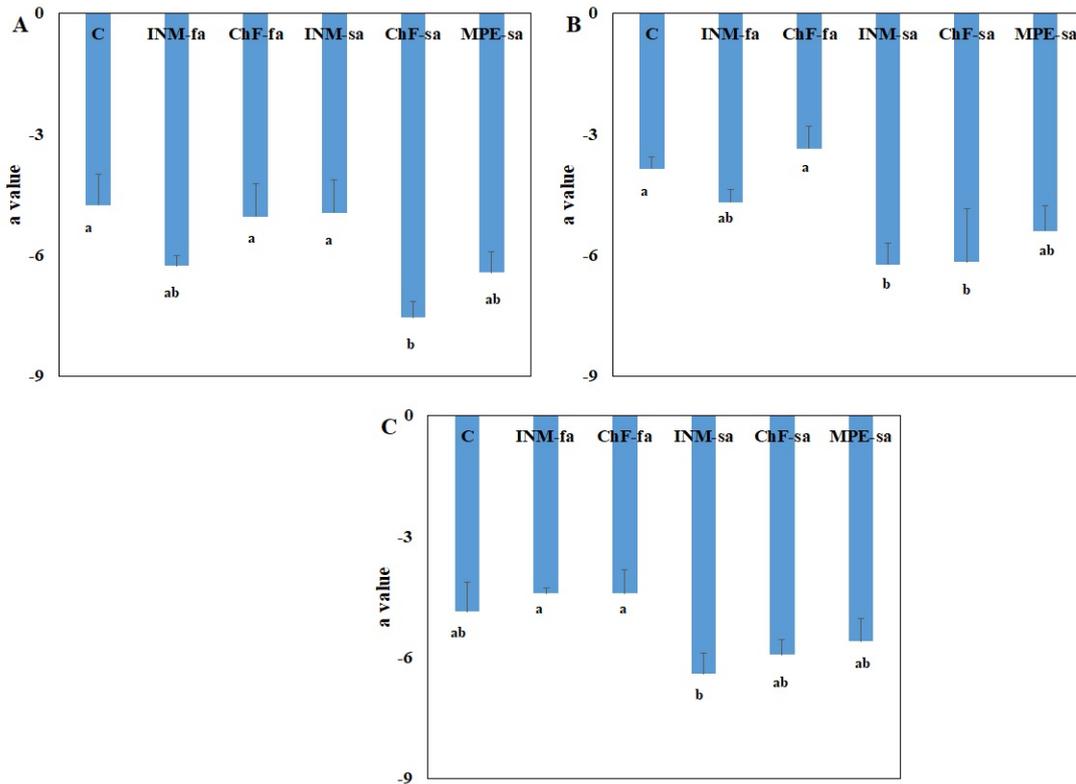
Supplementary Material Table S3 Phylogenetic analysis of *Sideritis* taxa using the plastid molecular marker *psbA-trnH*. Alignment of 94 *Sideritis* DNA sequences retrieved from GenBank compared to *Sideritis syriaca* subsp. *syriaca* GR-1-BBGK-15,5939 specimen of the current study (OP909054); the conserved areas (100%) are toggled.



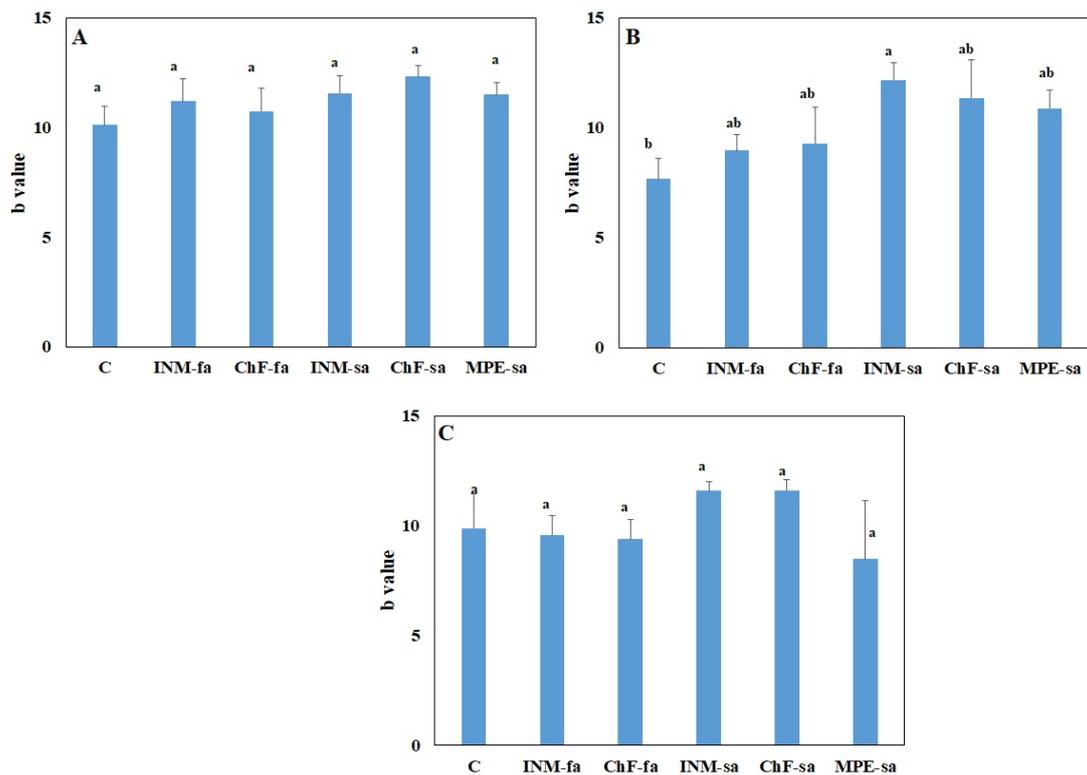
Supplementary Figure S1. Effect of fertilization scheme applied through foliar or soil on leaf index of absorbance difference of *Sideritis syriaca* subsp. *syriaca* at vegetative (A), early flowering (B), and full flowering (C) stage. C: Control (water); INM-fa: Integrated nutrient management (INM) by foliar application; ChF-fa: Conventional inorganic fertilization (ChF) by foliar application; INM-sa: INM by soil application; ChF-sa: ChF by soil application; MPE-sa: Mixture of plant extracts as biostimulant by soil application (THEOMASS). Columns represent the mean of three replicates \pm SEM. Within each plot, different letters indicate significant differences among means.



Supplementary Figure S2. Effect of fertilization scheme applied through foliar or soil on leaf L value of *Sideritis syriaca* subsp. *syriaca* at vegetative (A), early flowering (B), and full flowering (C) stage. C: Control (water); INM-fa: Integrated nutrient management (INM) by foliar application; ChF-fa: Conventional inorganic (ChF) fertilization by foliar application; INM-sa: INM by soil application; ChF-sa: ChF by soil application; MPE-sa: Mixture of plant extracts as biostimulant by soil application (THEOMASS). Columns represent the mean of three replicates \pm SEM. Within each plot, different letters indicate significant differences among means.



Supplementary Figure S3. Effect of fertilization scheme applied through foliar or soil on leaf a value of *Sideritis syriaca* subsp. *syriaca* at vegetative (A), early flowering (B), and full flowering (C) stage. C: Control (water); INM-fa: Integrated nutrient management (INM) by foliar application; ChF-fa: Conventional inorganic fertilization (ChF) by foliar application; INM-sa: INM by soil application; ChF-sa: ChF by soil application; MPE-sa: Mixture of plant extracts as biostimulant by soil application (THEOMASS). Columns represent the mean of three replicates \pm SEM. Within each plot, different letters indicate significant differences among means.



Supplementary Figure S4. Effect of fertilization scheme applied through foliar or soil on leaf b value of *Sideritis syriaca* subsp. *syriaca* at vegetative (A), early flowering (B), and full flowering (C) stage. C: Control (water); INM-fa: Integrated nutrient management (INM) by foliar application; ChF-fa: Conventional inorganic fertilization (ChF) by foliar application; INM-sa: INM by soil application; ChF-sa: ChF by soil application; MPE-sa: Mixture of plant extracts as biostimulant by soil application (THEOMASS). Columns represent the mean of three replicates \pm SEM. Within each plot, different letters indicate significant differences among means.