


FINAL REPORT SI25BT006IGS
SI25BT006IGS ESSAY
EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD YEAR 2025

Promoter

IGS PROJECT

Test Entity		
		18/07/2025
SISTEMAS DE CONTROL DE PRODUCCIÓN, SL.	SIGNED: ANA ORRICO MARÍN Technical Director of SICOP	Date

COMPLETION OF THE STUDY: 21/06/202

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SUMMARY AND CONCLUSIONS

This trial was carried out in a crop of Olive Trees (*Olea europaea*) of the Marteña picual variety in a pot on 02/04/2025 and ended on 21/06/2025. 3 theses were established with 4 plots for each of them. Each plot is made up of 7 plants, with a theoretical planting framework of 4m x 1.5m, obtaining a sowing density of 1,666.6 plants/ha in 10L pots with a total area of 168^m². Three applications were made during the course of the trial: the first was carried out on 12/04/2025 with the culture in the BBCH 15 phenological stage, the second application was made on 02/05/2025 with BBCH 19 status and the last on 01/06/2025 with BBCH 69 status.

The following parameters were evaluated in the crop: vigor, bud breakage, plant height, SPAD, leaf area, fresh aboveground and root biomass. In summary, it can be concluded under the conditions tested:

Vigor. The T2-Product B treatment tends to improve the vigor of the treated plants with 39.41% at 60DAT and to a lesser extent the T3-Cepacet treatment 9.41%, being the 60DAT moment where the best results are obtained in both cases.

Stem length: In general, both treatments promoted greater growth compared to the control, although with different intensity and consistency throughout the trial, with the T2-Product B treatment obtaining the greatest increase at 80DAT with a 5.08% difference compared to the control.

Leaf Area: Both the T2-Product B and T3-Cepacet treatments favored leaf development compared to the control, with T2-Product B showing a more sustained and effective response throughout the evaluated period with a maximum of 8.04% at 80DAT compared to 3.36% for T3-Cepacet.

Fresh aboveground and root biomass. The T2-Product B treatment has a greater biostimulant potential on olive tree growth, both in the air with a 34.52% difference and at the root level with 15.85%, while the effect of T3-Cepacet has a milder response (2.92%) and is mainly located in the root system (7.39%).

Phytotoxicity. No symptoms of phytotoxicity were observed in the theses tested.

Daniel Franco Aragón
Experimental Biologist

OVERVIEW

1.1- INFORMATION REGARDING THE PROMOTER

PROMOTER:	Intelligent Green Symbiosa Project
LOCALIZATION:	-
HEAD OF THE TRIAL:	-
CONTACT:	-

1.2- INFORMATION REGARDING THE TEST ENTITY

TEST ENTITY:	SICOP Sistemas de Control de Producción, SL.
LOCALIZATION:	Industrial Estate "La Gasolinera", 5 18680, Salobreña (GRANADA)
TECHNICAL DIRECTOR:	Ana Orrico Marín Tel: +34 699 910 841 e-mail: ana@sicop.es
EXPERIMENTERS:	Jorge De La O Sánchez Tel: +34 666998568 e-mail: jorge@sicop.es
	Daniel Franco Aragón Tel: +34 627 253 023 e-mail: daniel@sicop.es

1.3- CONFIDENTIALITY

All information recorded in this document must be strictly confidential.

No information related to this report, as part of the SI25BT006IGS study, will be shown to third parties without prior notification and authorization from the promoter, unless requested by the administrative authorities.

The promoter may not reveal or show to third parties the internal procedures of SICOP provided in this report without prior notification and authorization from SICOP, unless required by the administrative authorities.

1.4- DISTRIBUTION OF THE REPORT

ORIGINAL OF THE FINAL REPORT	IGS Project
COPY OF THE FINAL REPORT	SICOP
FIELD DATA	SICOP

1.5- FILE

SICOP will keep the primary field data of this study and the copy of the final report on file for 10 years. Unless expressly requested by the promoter, SICOP will destroy said documentation at the end of the archiving period.

1.6- STATEMENT FROM THE TECHNICAL DIRECTOR

This study has been carried out under the EOR 50/03 accreditation granted by the Spanish Ministry of Agriculture, Food and the Environment for the performance of officially recognised tests in accordance with Royal Decree 2163/1994, of 4 November, which implements the harmonised community authorisation system for the marketing and use of plant protection products (BOE no. 276, of 18 November 1994) and in compliance with Regulation (EC) No. 1107/2009 of the European Parliament and of the Council of 21 October 2009 on the placing of plant protection products on the market.

The design of the experiments, the data collection, the analysis of the results and the final report have been carried out in accordance with the "Good Experimental Practices", the "Good Agricultural Practices" and the corresponding EPPO guidelines.

The data included in this report faithfully reflect the data obtained during the conduct of the study.

SICOP is not responsible for decisions made or actions taken based on this report.

The report includes annexes.

2. MATERIAL EXPERIMENTAL

2.1- TESTED FORMULATION

PRODUCT	ACTIVE MATERIAL
PRODUCT B	BACTERIA
Cepacet	(BACILLUS MEGATERIUM CEPA CECT 9689) 0.01% MYCORRHIZAE

2.2- CULTIVATION

Cultivation: Olive

Botanical Name: *Olea europaea*

Order: Laniales

Family: Oleaceae

Genus: *Olea*

Species: *O. europaea*

Variety: Marteña Picual

Transplant date: 02/04/2025

Planting density: 1,666.6 plants/m²

Planter dimensions: 10L

Watering mode: 3L/h drippers

Cultivation system: 10-liter planters in semi-field conditions.

Planting system: Sowing in a nursery and subsequent transplanting in a pot.

2.3- OBJECTIVE

To evaluate the biostimulant effect of products based on microorganisms under semi-field conditions in an olive crop.

2.4- EXPERIMENTAL USE

CULTIVATION	OBJECT OF THE STUDY	APPLICATION TYPE
Olive tree	To evaluate the biostimulant effect of products based on microorganisms in olive trees under semi-field conditions.	Irrigation

3. STUDY OF ACTION IN THE FIELD

3.1- MATERIALS AND METHODS

3.1.1 LIST OF TESTS CARRIED OUT

STUDY CODE	TRIAL CODE	TYPE OF TEST	LOCALIZATION
SI24BT006IGS	SI24BT006IGS	Biostimulant	Salobreña



Photograph 1.- General appearance of the test in semi-field conditions.

3.1.2 TEST LOCATION

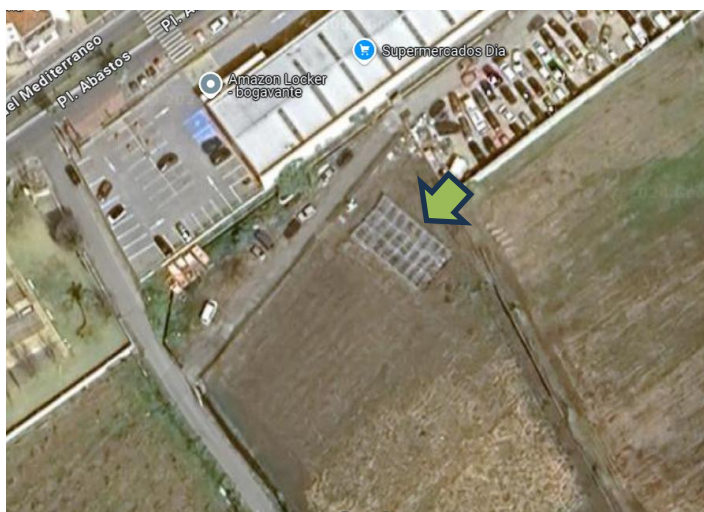


Image 1. Global location of the trial.

3.1.3 STUDY CONDITIONS

The design of the trial was done using completely random blocks. Four repetitions of each of the theses contained in the protocol were performed, including the control in the trial plots.

The culture was carried out in semi-field conditions under an *antithrips mesh roof*. Irrigation was carried out in an automated manner using 3L/h water drippers and fertilization was applied manually in the middle of the trial.



Photograph 2. Detail of the newly transplanted olive tree cultivation. Photograph 3. EDATool probe installed in a planter, this instrument is composed of two blood pressure monitors, a temperature probe and soil EC.

The following graph shows the climatic conditions during the trial and for which the results of this study are valid. These data were collected by EDAGRO's EDATool probe, providing meteorological information and the state of the soil of the planters (see Annex I).

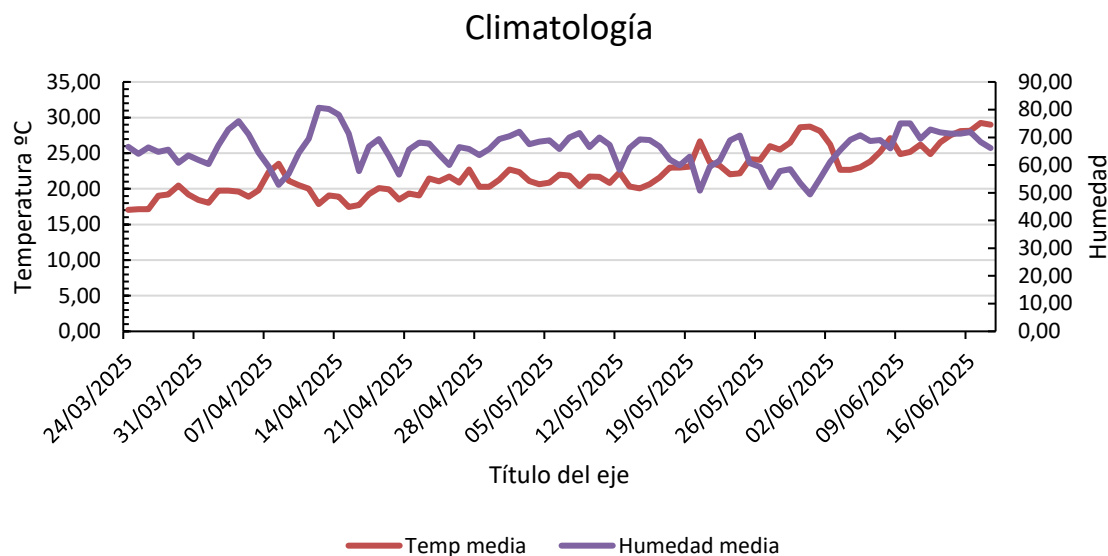


Figure 1. Weather data during the test. Source: EDATOOL

3.1.4 CHARACTERISTICS OF THE PLOT

The test was carried out in a semi-field facility, each cabin has dimensions of 5m x 2.25m, that is, 11.25m². The plots were randomly distributed, with each cabin containing a total of two repetitions located on the sides as can be seen in photograph 1. Each thesis is made up of 4 repetitions, so the essay is composed of 12 independent plots each composed of 7 pots of 10 l. The theoretical planting framework used to carry out the product dosage was 2.4m x 1.6m, which meant a planting density of 166.66 plants/ha.



Image 3. View of a complete plot.

3.1.5 TREATMENTS TESTED

3.1.5.1 HANDLING OF TEST PRODUCTS

The test substances were received at SICOP's facilities from Symbiagro. This was stored in SICOP's BPE product warehouse, where temperature and humidity are periodically controlled to ensure the correct conservation of the test products.

3.1.5.2 LIST OF TREATMENTS AND TRIAL SKETCH

THESIS	PRODUCT	APPLICATION	DOSE
1	Control	WATER	-
2	Product B	1A: 10DAT 2A: 30DAT 3A: 60DAT	1A: 200g/100L 2A and 3A: 5kg/ha
3	Cepacet		2L/ha

*Days after the transplant. The application dates were established based on the BBCH of the plants, therefore, they vary slightly with those proposed in the protocols.

Sketch of the trial in the culture chamber

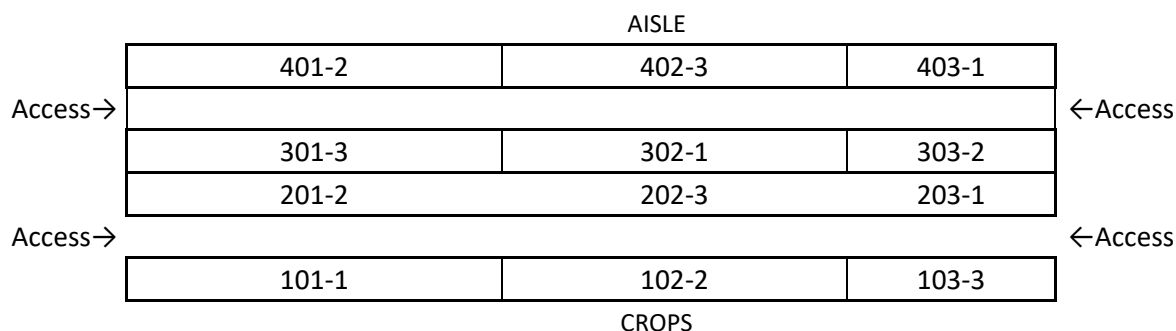


Image 3. Sketch of the distribution of the test in the booths.

3.1.5.3 PRODUCT APPLICATIONS

A total of 3 irrigation applications were carried out according to the proposed schedule. The first application was made 10 days after transplantation (10 DATs), at 30 DAT and 60 DATs. The treatments were applied manually with a 300ml measuring cup of which each plant received an amount of 100ml of broth (water with the test product mixed). In each application the floor was wet with 100ml of water so that the product penetrated the soil and after the application another 100ml was added to seal the product.



Image 5.-Measuring cup with which the test products were applied.

3.1.6 EVALUATION METHODOLOGY

The following parameters were evaluated:

- SPAD. Amount of chlorophyll with the Konica Minolta SPAD-502 instrument
- Vigor. With the Trimble GreenSeeker instrument.
- Plant height. With a tape measure.
- Leaf area. Through *jImage Software*
- Fresh aboveground and root biomass. With precision scale.

3.1.7 CALENDAR OF ACTIONS

At the beginning of the trial, a plan is established that includes the actions to be carried out at all times in accordance with the protocol. The following table shows the final schedule of actions:

Date	Performance
02/04/2025	Transplant
12/04/2025	1st Application + 1st Evaluation (SHOOT LENGTH) (10 DAT)
02/05/2025	2nd Evaluation (Leaf area (2 rep leaves/plants), vigour and shoot length) + 2nd Application (30 DAT)
01/06/2025	3rd Evaluation (Leaf area (2 rep leaves/plants), vigour and shoot length) + 3rd Application (60DAT)
21/06/2025	4th Evaluation (Leaf area (2 rep leaves/plants), vigour, shoot length. Shoot and root biomass (3 rep/plants) (80 DAT)

3.2- RESULTS AND DISCUSSION

3.2.1 VIGOR (NDVI)

To measure crop vigor, or normalized difference vegetation index (NDVI) during the study, the "Green Seeker" instrument was used to obtain objective and comparable values between the different treatments. 7 plants per plot were independently evaluated. The following table shows the results of the evaluations carried out:

	02/05/2025 30DAT	01/06/2025 60DAT	21 /06/2025 80DAT
T1- Control	0.046 a	0.061 b	0.144 a
T2- Product B*	0.156 a	0.085 a	0.163 a
T3- Cepacet 2L/Ha	0.047 a	0.066 b	0.153 a

During the first evaluation carried out on 02/05/2025, the treatments yielded a very similar ndvi value. The T2-Product B treatment yielded a value of 0.156, to a lesser extent the T1-Control and T3-Cepacet treatments that obtained a result of 0.046 and 0.047 respectively.

In the second evaluation carried out by 60DAT on 01/06/2025, the T2-Product B treatment stands out with an ndvi of 0.085, while the rest of the treatments obtain a 0.061 for the control and for the T3-Cepacet treatment a 0.066. In the latest 80DAT evaluation carried out on 21/06/2025, the T2-Product B treatment obtains an advantage over the T1-Control (0.144) and T3-Cepacet (0.153) with an ndvi of 0.163. Therefore, the T2-Product B treatment tends to have better results in all evaluations, although these differences are very subtle.

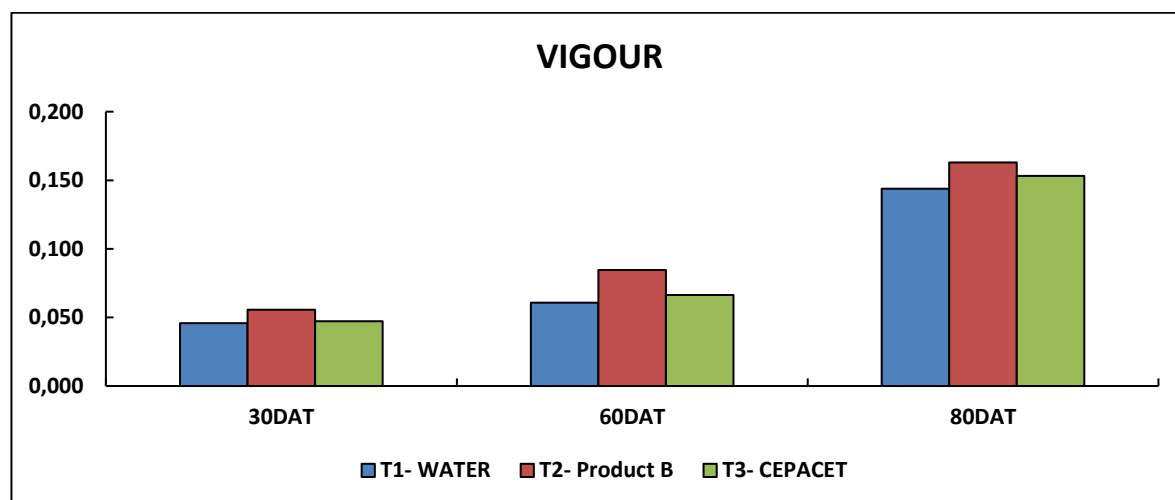


Figure 2. Evaluation of vigor

Statistical analysis

During the first and third evaluations, there were no statistically different differences between the treatments. On the other hand, during the second evaluation, the T2-Product B treatment showed statistically significant differences with T1-Control and T3-Cepacet ($P=.15$, Student-Newman-Keuls).

% difference of treatments in force with respect to T1-Control.

	02/05/2025 30DAT	01/06/2025 60DAT	21/06/2025 80DAT
T2- Product B	21.88	39.41	13.15
T3- Cepacet	3.13	9.41	6.45

The results obtained show notable differences in the vigor of olive plants subjected to T2-Product B and T3-Cepacet treatments throughout the evaluated cycle. This trend continued at 60DAT, where T2-Product B reached the maximum vigor value (39.41%), far surpassing T3-Cepacet (9.41%). However, at 80DAT an abrupt decrease in the vigor of both treatments was observed, being more marked in T2-Product B (13.15%), although this continued to present higher values compared to T3-Cepacet (6.45%). These results indicate that T2-Product B induced greater initial vegetative development, although the decrease observed towards the end of the period suggests a possible loss of effect.

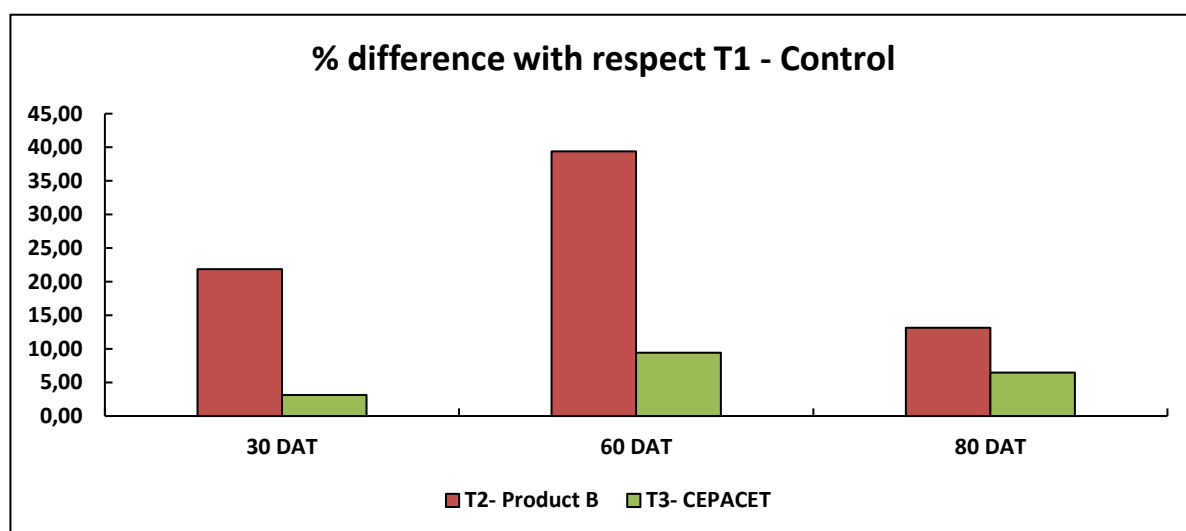


Figure 3. % difference in vigor with respect to control. No improvement is observed.

3.2.3 STEM LENGTH

To evaluate the growth of the olive plants, the stem was measured from the base to the apical meristem, obtaining the following results:

	12/04/2025 10DAT	02/05/2025 30DAT	01/06/2025 60DAT	21/06/2025 80DAT
T1- Control	72.07 a	80.04 c	93.25 a	111.18 b
T2- Product B	73.93 a	82.61 a	96.25 a	116.82 a
T3-Cepacet	73.89 a	81.11 b	94.11 a	115.04 a

The measurements were made at four key phenological moments. Since the first evaluation (10DAT), the T2-Product B and T3-Cepacet treatments showed a positive trend in stem development, presenting them slightly longer (73.93 and 73.89 cm, respectively) compared to the control (72.07 cm). This difference was accentuated in the following stages, highlighting the treatment with T2-

Product B, which reached 82.61 cm at 30DAT and 96.25 cm at 60DAT, compared to 80.04 cm and 93.25 cm at the control.

In the last evaluation (80DAT), T2-Product B maintained the longest stem length (116.82 cm), followed by T3-CEPACET (115.04 cm) and T1-Control (111.18 cm). These results indicate that both treatments favored the growth of the olive stem, with a more consistent and marked effect in the treatment with T2-Product B.

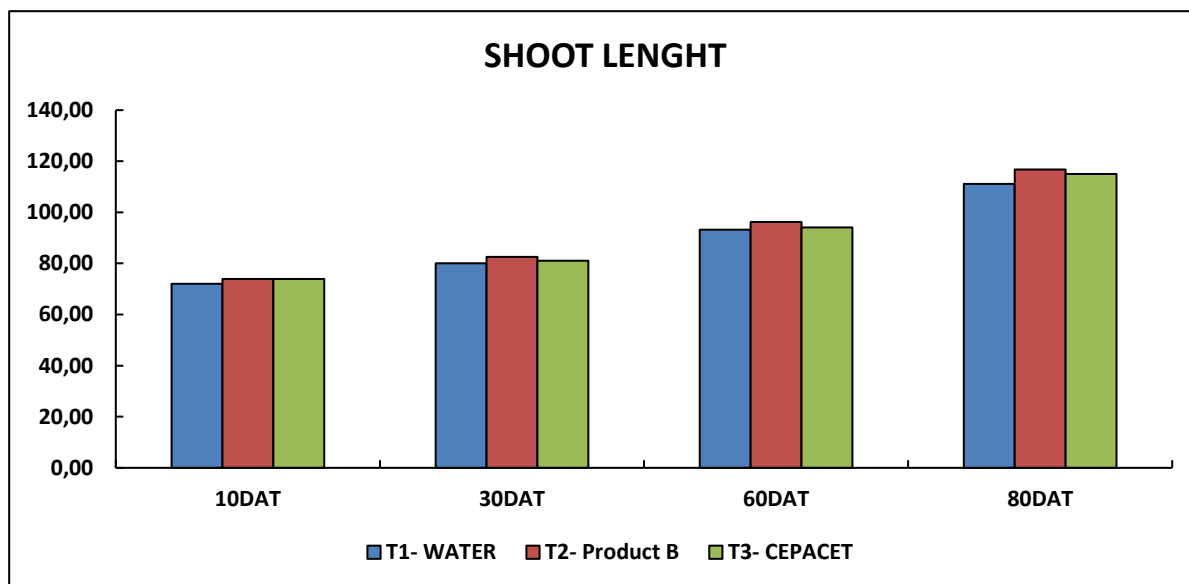


Figure 5. Evaluation of the length of the olive tree stems in the different evaluations carried out.

Statistical analysis

In the first evaluation, there are no significant differences after statistical analysis between treatments. In the case of the second evaluation, the T2 and T3 treatments present statistically significant differences with the control as well as between them. During the third evaluation, the treatments did not present statistically significant differences. Finally, in the fourth evaluation, the T2-Product B and T3-Cepacet treatments showed statistically significant differences with the control but not between them ($P=0.15$, Student-Newman-Keuls).

% difference of treatments with respect to height at T1-Control.

The following table shows the percentage differences in stem length between T2-Product B and T3-Cepacet treatments compared to the control, evaluated at 10, 30, 60 and 80 days after transplantation (DAT).

	12/04/2025 10 DAT	02/05/2025 30 DAT	01/06/2025 60 DAT	21/06/2025 80 DAT
T2- Product B	2.58	3.21	3.22	5.08
T3- Cepacet	2.53	1.34	0.92	3.47

Overall, both treatments promoted greater growth compared to the control, although with different intensity and consistency throughout the trial. The T2-Product B treatment showed a constant and

sustained increase, starting with 2.58 % at 10 DAT and reaching 5.08 % at 80 DATs, suggesting a cumulative effect on stem development.

In contrast, T3-CEPACET showed a more variable behavior, with a slight initial increase of 2.53 % (10DAT), followed by a marked reduction in 30 and 60 DATs of 1.34 % and 0.92 %, respectively, and then partially recovered its effect with 3.47 % at 80 DAT.

These results indicate that, although both treatments resulted in improvements over the control, T2-Product B induced a more consistent and progressive effect on the growth of the main stem of olive plants.

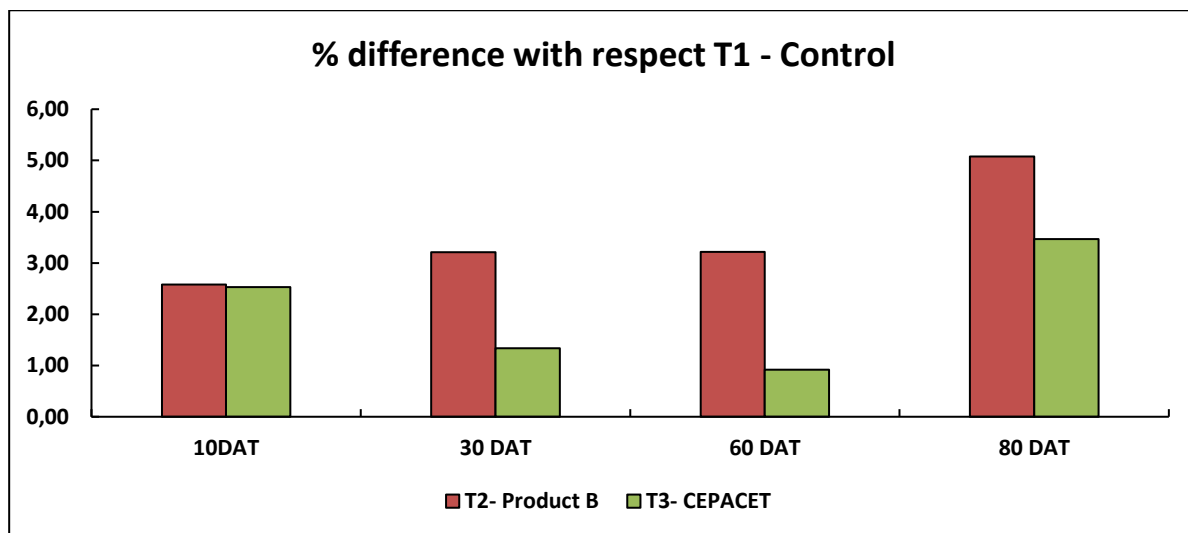


Figure 6. Table with the differences in % with respect to the control. The T2 treatment improves plant height in all evaluations.

3.2.4 LEAF AREA

A total of three evaluations were carried out, taking as samples 15 unfolded leaves of similar size and development of each plot. The following table shows the averages in cm² obtained in each thesis tested

From the first evaluation (30 DATs), the treatments showed leaf area values slightly higher than the T1-control: T2-Product B reached 2.37 cm² and T3-Cepacet 2.30 cm², compared to 2.22 cm² in the control. This trend continued throughout the cycle, with a more evident improvement observed in T2-Product B, which registered 2.79 cm² (60 DAT) and 3.80 cm² (80 DAT), compared to 2.64 cm² and 3.52 cm² in T1-Control. T3-Cepacet also showed a positive effect, although less marked than T2-Product B, with values of 2.65 cm² and 3.64 cm² at the same points.

	02/05/2025 30 DAT	01/06/2025 60 DAT	21/06/2025 80 DAT
T1- WATER	2.22 b	2.64 a	3.52 a
T2- Product B	2.37 a	2.79 a	3.80 to
T3- CEPACET	2.30 ab	2.65 a	3.64 a

These results indicate that both biostimulants contributed to the increase in leaf area in the treated plants, with the effect of T2-Product B being more consistent. Greater leaf development may be associated with greater photosynthetic capacity and, therefore, better physiological performance under cultivation conditions.

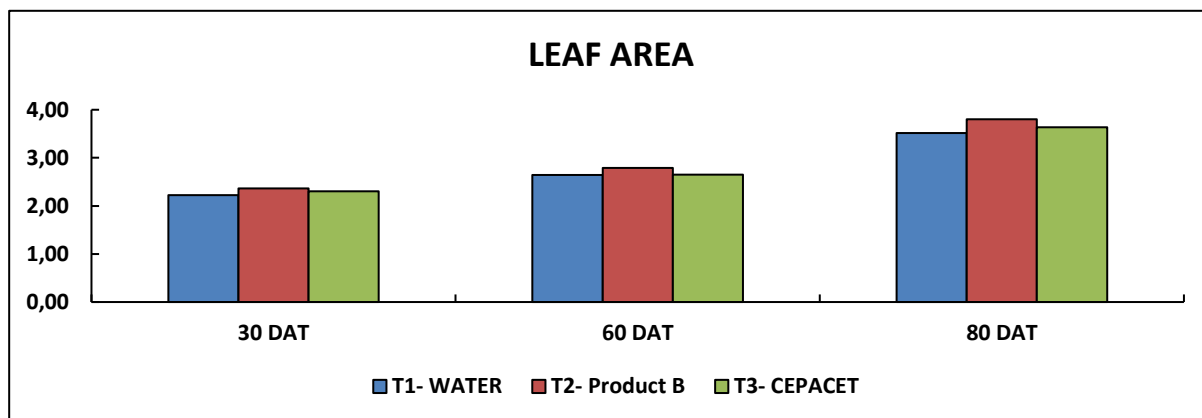


Figure 7. Leaf area of plants in cm².

Statistical analysis

During the first evaluation, the T2-Product B treatment showed statistically significant differences with the Control (T1) but not with the T3-Cepacet treatment. Finally, in the second and third evaluations there are no statistically significant differences between treatments. ($P=0.15$, Student-Newman-Keuls).

% difference of treatments with respect to the leaf area of T1-Control.

In the T2-Product B treatment, a constant increase in leaf area was observed compared to the control in all evaluations. Specifically, at 30 DATs there was an increase of 6.44%, which remained at 5.76% at 60 DATs and rose again to 8.04% at 80 DATs. This trend suggests a sustained and slightly increasing effect of the treatment on leaf development in the later stages of cultivation.

	02/05/2025 30 DAT	01/06/2025 60 DAT	21/06/2025 80 DAT
T2- Product B	6.44	5.76	8.04
T3- Cepacet	3.71	0.29	3.36

On the other hand, the T3-CEPACET treatment showed more subtle and variable increases. At 30 DAT, the positive difference with respect to the control was 3.71%, decreasing notably to 0.29% at 60 DAT, and partially recovering its effect at 80 DAT with an improvement of 3.36%.

These results indicate a more unstable response over time, with a lower relative efficacy on leaf area compared to T2-Product B.

Overall, the results indicate that both treatments favored leaf development compared to control, with T2-Product B showing a more sustained and effective response throughout the period.

evaluated. This increased growth could be associated with better physiological performance, possibly linked to a stimulatory effect on cell expansion or nutrient assimilation.

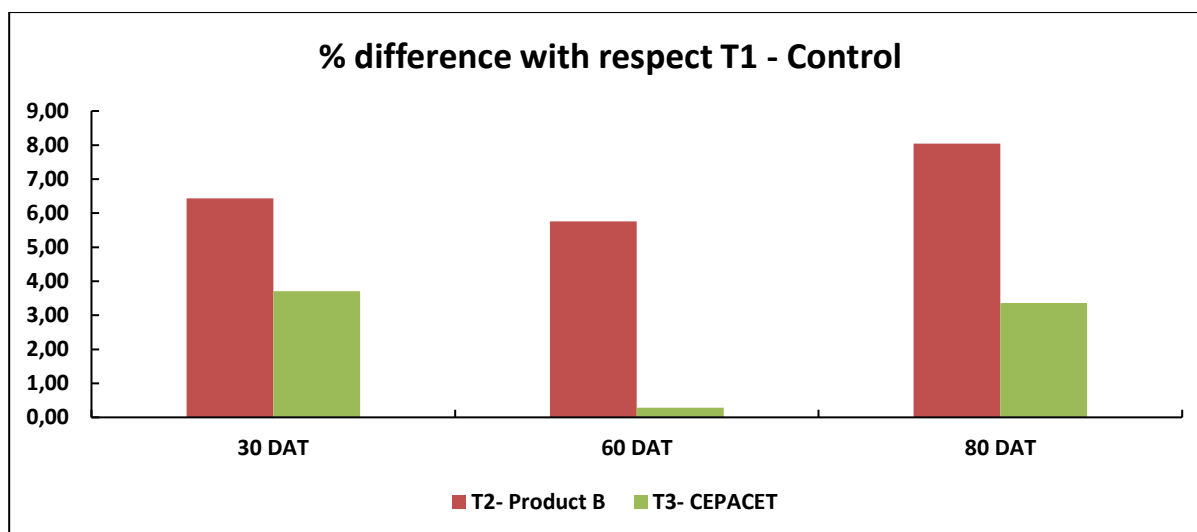


Figure 8. Table with the differences in % with respect to the control

3.2.5 AIR AND ROOT FRESH WEIGHT

The fresh weight of both the aerial and the root parts was carried out at the end of the trial, obtaining the data reflected in the following table:

	Aerial part (g)	Root part (g)
T1- Control	77.18 b	30.43 a
T2- Product B	103.82 a	35.25 a
T3-Cepacet	79.43 b	32.68 a

As for the aerial part, the T2-Product B treatment promoted a notable increase in biomass, reaching a value of 103.82 g compared to the 77.18 g recorded in the control, which represents an increase of 26.64 g. This improvement suggests a significant effect of the treatment on the vegetative development of the crop. On the other hand, T3-Cepacet showed a slightly higher value than the control (79.43 g), with a difference of only 2.25 g, which indicates a very limited impact on the aerial part.

Regarding root biomass, T2-Product B also showed a positive effect, with an accumulation of 35.25 g compared to 30.43 g in the control, which represents an increase of 4.82 g. T3-Cepacet also slightly improved this parameter, reaching 32.68 g, i.e. 2.25 g more than the control.

Overall, the results indicate that the T2-Product B treatment significantly favors both the aerial and root development of olive trees, while the effect of T3-Cepacet is more discreet and limited, especially in the aerial part. This suggests a higher efficacy of the T2-Product B treatment in terms of total biomass under the conditions of the present trial.

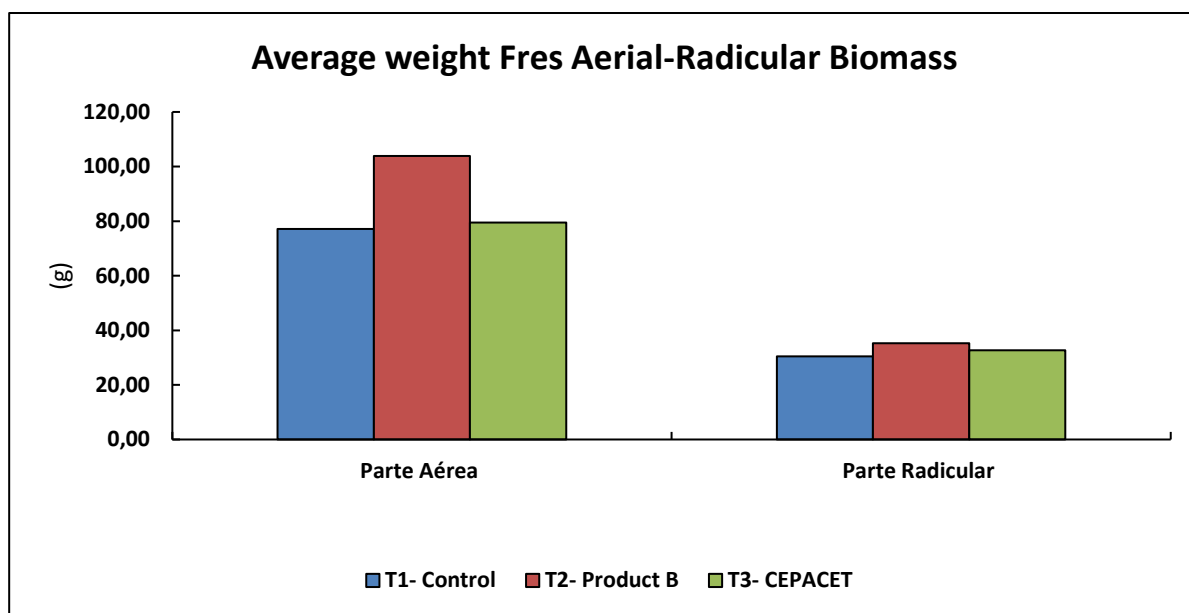


Figure 9. Fresh air and root weight.

Statistical analysis

In the evaluation of fresh aboveground biomass, the T2-Product B treatment presented statistically significant differences with the control (T1) and the T3-Cepacet treatment. In the case of fresh root biomass, no statistically significant differences were obtained between the theses tested. ($P=0.15$, Student-Newman-Keuls).

% difference of treatments with respect to the aerial and root part of T1-Control.

The T2-Product B treatment showed a clearly superior effect on both parts of the plant. In the aerial part, an increase of 34.52% was recorded with respect to control, which indicates a notable impact on vegetative growth. In the root part, the increase was 15.85%, also reflecting a significant stimulus in root development.

	Aerial part (g)	Root part (g)
T2-Product B	34.52	15.85
T3-Cepacet	2.92	7.39

In contrast, the T3-Cepacet treatment had more moderate effects. The increase in aboveground biomass was 2.92%, while in the root part an improvement of 7.39% was observed. These values, although positive, reflect a lower efficiency compared to T2-Product B, especially in the development of the aerial part.

Overall, the data confirm that T2-Product B has a greater biostimulant potential on olive growth, both at the aerial and root level, while the effect of T3-Cepacet is limited, with a milder and localized response mainly in the root system.

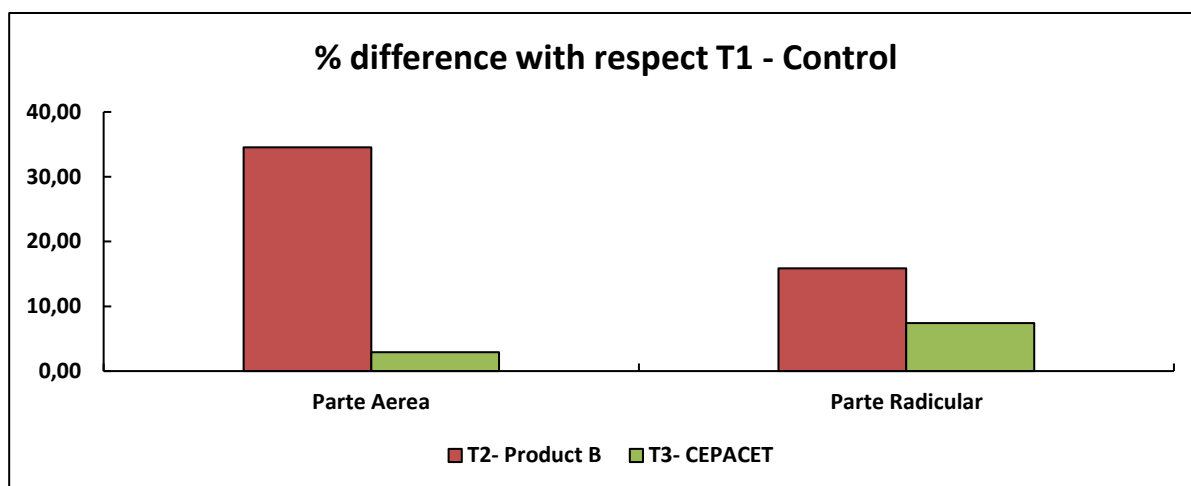


Figure 10. % difference between the T1-Control treatment and the rest of the treatments.

3.2.6 PHYTOTOXICITY

In each evaluation, the presence of any symptoms of phytotoxicity was examined, and no symptoms of phytotoxicity were observed after the application of any of the products and doses tested.

Annex I. CLIMATE DATA

Data obtained from the Almuñécar weather station:

Date	Min. Temp. (°C)	Max. Temp. (°C)	Average temperature (°C)	Hum. relative min. (%)	Hum. Relative max. (%)	Hum. Mean Relative (%)
02/04/2025	9,64	23,15	16,49	67,87	99,7	40,59
03/04/2025	14,49	20,08	17,05	84,0	100,0	53,2
04/04/2025	12,97	20,28	16,4	87,6	100,0	66,71
05/04/2025	8,71	20,48	15,84	66,2	99,9	39,68
06/04/2025	8,64	22,75	17,67	51,93	95,9	34,39
07/04/2025	9,91	22,88	17,25	58,96	99,9	35,18
08/04/2025	9,58	24,35	17,24	59,71	94,0	26,77
09/04/2025	10,64	25,15	17,52	59,01	88,8	28,84
10/04/2025	13,64	23,68	18,25	61,94	87,8	38,45
11/04/2025	11,97	22,15	17,21	74,5	100,0	45,59
12/04/2025	14,24	17,43	15,95	99,9	100,0	99,8
13/04/2025	12,57	23,48	16,56	91,5	100,0	49,07
14/04/2025	12,3	22,62	17,15	74,3	100,0	49,87
15/04/2025	9,24	19,75	14,6	64,79	99,9	32,98
16/04/2025	9,71	21,75	14,89	43,92	74,1	26,3
17/04/2025	9,98	22,68	16,99	65,05	99,9	38,72
18/04/2025	9,97	23,48	16,45	71,5	99,9	36,92
19/04/2025	9,3	22,55	17,13	54,3	99,9	23,36
20/04/2025	7,97	20,75	14,38	56,6	99,9	34,71
21/04/2025	9,91	22,42	16,64	63,4	99,9	32,98
22/04/2025	9,28	22,56	16,68	69,9	99,9	39,49
23/04/2025	9,97	22,15	16,45	78,0	100,0	45,39
24/04/2025	9,78	25,07	17,52	63,37	100,0	31,11
25/04/2025	11,24	25,14	18,08	56,51	97,8	28,1
26/04/2025	11,57	27,2	20,71	60,85	100,0	28,25
27/04/2025	12,71	23,35	17,94	75,8	100,0	41,39
28/04/2025	12,5	21,55	17,15	74,4	99,9	40,39
29/04/2025	10,9	23,28	17,36	72,8	100,0	41,26
30/04/2025	12,84	22,28	17,75	81,5	100,0	48,87
01/05/2025	16,69	22,42	18,78	88,1	100,0	52,07
02/05/2025	14,04	26,67	19,76	71,6	100,0	35,1
03/05/2025	12,04	26,35	19,0	61,36	99,9	30,97
04/05/2025	11,5	22,75	17,5	68,74	99,9	39,79
05/05/2025	11,64	23,28	17,88	67,13	100,0	42,19
06/05/2025	14,11	24,35	20,53	53,17	100,0	39,97
07/05/2025	13,24	22,07	17,63	84,6	100,0	57,08
08/05/2025	13,11	22,68	17,77	72,8	100,00	41,12
09/05/2025	12,24	23,82	18,79	63,4	100,00	38,78
10/05/2025	13,04	24,34	18,55	69,96	100,00	39,32

11/05/2025	12,37	23,08	18,33	62,98	99,9	33,79
12/05/2025	14,42	23,52	19,79	44,2	68,03	34,39
13/05/2025	11,5	22,42	17,05	64,84	99,9	36,45
14/05/2025	12,17	22,68	16,51	84,2	100,00	45,06
15/05/2025	12,1	23,21	18,48	63,29	100,00	39,05
16/05/2025	11,24	24,2	18,11	70,3	100,00	39,24
17/05/2025	12,04	26,2	19,15	59,53	100,00	26,56
18/05/2025	12,1	27,93	20,26	48,6	81,7	17,55
19/05/2025	12,77	28,47	21,89	45,55	99,9	21,96
20/05/2025	13,64	26,00	21,08	48,46	90,2	31,91
21/05/2025	12,57	26,00	19,94	57,61	98,5	33,83
22/05/2025	12,57	28,00	20,58	56,61	99,2	27,63
23/05/2025	15,63	22,7	18,49	82,9	100,00	50,2
24/05/2025	13,51	23,26	18,67	77,3	100,00	41,98
25/05/2025	12,84	27,4	20,02	62,44	100,00	24,16
26/05/2025	12,44	29,2	21,67	46,28	99,9	24,62
27/05/2025	12,97	27,87	21,46	41,24	68,34	20,69
28/05/2025	13,97	26,8	21,31	53,33	96,00	30,23
29/05/2025	14,76	31,99	23,16	50,33	83,9	22,02
30/05/2025	16,43	32,81	24,59	41,21	58,56	22,56
31/05/2025	16,49	32,51	24,72	40,2	97,6	15,88
01/06/2025	15,69	32,86	24,15	46,62	88,7	22,95
02/06/2025	15,69	28,2	22,84	49,91	94,6	34,3
03/06/2025	13,97	25,00	20,26	61,53	100,00	35,86
04/06/2025	12,84	25,87	20,27	71,6	100,00	39,51
05/06/2025	13,44	26,27	20,13	74,6	100,00	38,71
06/06/2025	14,63	27,6	20,95	74,2	100,00	35,5
07/06/2025	15,76	29,92	22,75	63,78	100,00	37,43
08/06/2025	18,23	30,19	24,12	70,3	100,00	34,36

Data obtained through EDATOOL:

Date	Te mp. Min	Te mp. Ma x	Medium Temp	Humidity Min	Humid ity Max	Medium humidity	DPV	Sup Tension	Prof Tension	Temp floor
24/03/ 2025	12	20	17.15	64.00	71.00	66.65	0.66	5.20	3.15	22.69
25/03/ 2025	12	25	17.13	59.00	71.00	64.08	0.73	6.13	2.44	21.19
26/03/ 2025	11	24	17.15	60.00	69.00	66.40	0.68	4.85	2.21	19.90
27/03/ 2025	14	25	19.02	59.00	70.00	64.73	0.81	5.15	2.48	21.68
28/03/ 2025	13	27	19.23	59.00	72.00	65.63	0.81	5.44	2.60	22.39

29/03/2025	15	28	20.48	52.00	72.00	60.88	0.99	5.00	2.38	23.37
30/03/2025	13	28	19.21	54.00	72.00	63.54	0.90	5.33	2.98	23.18
31/03/2025	11	29	18.46	49.00	72.00	61.88	0.93	5.17	2.92	22.53
01/04/2025	11	24	18.06	55.00	69.00	60.42	0.85	5.00	3.00	22.12
02/04/2025	13	27	19.73	60.00	73.00	67.21	0.82	4.71	3.52	23.64
03/04/2025	17	24	19.73	67.00	77.00	72.79	0.64	5.00	4.00	23.48
04/04/2025	16	26	19.63	70.00	82.00	75.81	0.58	4.17	3.13	22.26
05/04/2025	13	23	18.90	66.00	79.00	71.17	0.66	5.00	3.52	21.81
06/04/2025	14	29	19.79	57.00	70.00	64.52	0.86	5.21	4.06	22.31
07/04/2025	17	30	22.35	51.00	65.00	59.46	1.17	5.46	4.21	24.98
08/04/2025	14	35	23.52	41.00	64.00	52.83	1.60	5.10	3.96	25.56
09/04/2025	16	29	21.15	53.00	65.00	56.81	1.13	6.15	4.44	24.89
10/04/2025	17	26	20.52	58.00	69.00	64.40	0.89	7.00	5.33	23.86
11/04/2025	16	26	20.02	65.00	75.00	69.54	0.73	6.27	4.67	23.09
12/04/2025	16	20	17.85	76.00	83.00	80.69	0.40	4.15	2.98	19.72
13/04/2025	15	25	19.08	74.00	84.00	80.23	0.46	4.90	3.25	21.32
14/04/2025	13	24	18.90	71.00	84.00	78.15	0.50	5.27	4.00	21.95
15/04/2025	13	22	17.48	62.00	81.00	71.29	0.59	5.13	4.15	20.09
16/04/2025	13	26	17.71	47.00	64.00	57.79	0.90	6.25	5.15	19.40
17/04/2025	15	23	19.25	62.00	74.00	66.77	0.76	7.42	6.21	22.16
18/04/2025	15	28	20.10	65.00	75.00	69.42	0.76	8.92	7.40	23.46
19/04/2025	15	27	19.92	47.00	77.00	63.25	0.92	10.19	9.13	22.91
20/04/2025	13	27	18.48	52.00	66.00	56.52	0.95	12.08	11.27	21.15
21/04/2025	13	25	19.33	61.00	70.00	65.63	0.81	10.06	8.94	23.53
22/04/2025	14	25	19.06	64.00	73.00	68.06	0.73	5.04	3.83	23.67

23/04/2025	13	33	21.44	55.00	76.00	67.71	0.95	5.35	4.04	25.18
24/04/2025	14	30	21.06	51.00	73.00	63.79	0.99	5.88	4.35	25.43
25/04/2025	17	27	21.73	53.00	66.00	60.02	1.09	4.83	3.65	25.83
26/04/2025	15	28	20.88	60.00	72.00	66.53	0.89	5.19	3.93	25.38
27/04/2025	15	31	22.73	53.00	78.00	65.81	1.07	6.25	4.29	26.60
28/04/2025	15	31	20.30	49.00	71.00	63.64	0.97	8.30	5.79	24.15
29/04/2025	15	26	20.30	60.00	72.00	65.85	0.86	7.85	5.46	24.08
30/04/2025	16	31	21.29	59.00	76.00	69.42	0.85	4.96	3.73	24.64
01/05/2025	19	30	22.73	62.00	75.00	70.46	0.86	6.19	4.02	26.06
02/05/2025	18	29	22.33	61.00	79.00	72.08	0.79	7.27	5.04	26.18
03/05/2025	15	27	21.10	62.00	72.00	67.54	0.85	10.35	6.42	24.50
04/05/2025	17	25	20.65	62.00	72.00	68.50	0.78	14.56	8.52	24.03
05/05/2025	18	25	20.85	65.00	72.00	68.88	0.79	18.90	11.46	24.09
06/05/2025	17	26	22.00	63.00	72.00	65.85	0.92	12.75	8.60	25.34
07/05/2025	16	29	21.85	63.00	75.00	69.94	0.85	7.13	5.25	26.49
08/05/2025	16	25	20.38	65.00	76.00	71.60	0.71	6.88	4.81	24.63
09/05/2025	15	27	21.73	63.00	73.00	66.46	0.90	4.79	3.58	25.15
10/05/2025	16	29	21.69	64.00	75.00	69.96	0.82	6.15	4.21	26.15
11/05/2025	15	26	20.81	59.00	73.00	67.27	0.84	7.81	5.63	24.69
12/05/2025	17	27	22.31	54.00	65.00	58.31	1.15	8.21	5.94	25.38
13/05/2025	15	26	20.35	62.00	71.00	66.19	0.84	5.44	4.13	24.12
14/05/2025	15	27	20.08	61.00	75.00	69.25	0.77	6.15	4.21	23.41
15/05/2025	15	27	20.67	61.00	78.00	68.98	0.81	5.38	3.44	23.87
16/05/2025	15	29	21.58	62.00	74.00	66.69	0.92	5.65	3.73	25.83
17/05/2025	16	31	23.00	53.00	71.00	61.94	1.17	7.58	5.04	27.03

18/05/2025	16	30	22.98	54.00	66.00	59.85	1.19	11.06	7.67	26.84
19/05/2025	17	29	23.13	49.00	70.00	63.02	1.11	11.52	8.56	26.90
20/05/2025	19	34	26.67	45.00	62.00	50.83	1.82	7.15	5.27	29.43
21/05/2025	16	31	23.71	55.00	64.00	59.40	1.27	7.65	5.77	28.48
22/05/2025	16	30	23.25	56.00	67.00	61.65	1.15	7.54	6.15	27.96
23/05/2025	18	28	22.02	64.00	75.00	68.92	0.84	6.27	4.79	25.06
24/05/2025	16	29	22.19	61.00	79.00	70.69	0.86	5.73	3.83	26.78
25/05/2025	17	33	24.15	47.00	72.00	60.75	1.32	7.85	5.75	28.95
26/05/2025	15	33	24.06	52.00	69.00	59.38	1.36	7.29	5.67	28.70
27/05/2025	18	33	25.98	47.00	57.00	52.10	1.69	5.88	4.31	29.72
28/05/2025	19	34	25.52	52.00	65.00	57.83	1.48	6.00	5.00	29.95
29/05/2025	20	39	26.50	46.00	67.00	58.50	1.60	5.73	4.54	30.71
30/05/2025	22	36	28.65	47.00	66.00	53.58	1.94	7.06	7.77	32.08
31/05/2025	21	36	28.73	38.00	64.00	49.42	2.20	10.15	13.60	32.32
01/06/2025	21	38	28.13	44.00	66.00	55.33	1.89	15.81	18.96	31.85
02/06/2025	20	34	26.21	54.00	67.00	61.19	1.40	11.48	12.25	31.31
03/06/2025	18	28	22.67	62.00	71.00	65.35	0.98	10.44	9.54	27.39
04/06/2025	18	28	22.65	62.00	75.00	69.17	0.90	11.04	10.17	27.04
05/06/2025	15	30	23.02	62.00	78.00	70.79	0.89	7.48	5.42	28.21
06/06/2025	16	32	23.83	59.00	77.00	68.67	1.02	8.40	6.27	29.00
07/06/2025	18	33	25.19	56.00	77.00	69.04	1.09	8.85	4.98	29.67
08/06/2025	21	35	27.10	56.00	75.00	65.98	1.32	20.52	10.81	31.13
09/06/2025	22	29	24.85	72.00	79.00	75.06	0.80	18.69	11.58	27.95
10/06/2025	21	33	25.20	67.00	80.00	75.02	0.83	5.24	3.65	27.58
11/06/2025	22	31	26.23	64.00	74.00	69.54	1.06	7.40	5.67	29.35

12/06/ 2025	20	31	24.85	65.00	79.00	72.88	0.90	7.88	6.13	29.07
13/06/ 2025	21	34	26.52	64.00	79.00	71.85	1.04	9.08	5.63	29.58
14/06/ 2025	22	36	27.54	62.00	78.00	71.33	1.13	22.23	11.54	30.78
15/06/ 2025	22	36	28.13	60.00	78.00	71.31	1.18	40.13	20.13	31.10
16/06/ 2025	24	35	28.14	64.00	78.00	71.96	1.13	27.55	16.47	30.93
17/06/ 2025	23	37	29.25	57.00	77.00	68.31	1.40	8.88	5.38	31.53
18/06/ 2025	22	37	29.00	54.00	76.00	66.15	1.47	10.27	5.17	31.78

Annex II. STUDY PROTOCOL**Study Protocol****EOR 50/03****13/36/BPL51****Applicant: IGS PROJECT**

**EVALUATION OF THE BIOSTIMULANT EFFECT OF
PRODUCTS BASED ON MICROORGANISMS ON OLIVE
IN SEMI-FIELD.**

YEAR 2025**SI25BT006IGS****31/03/2025**

PROTOCOL: SI24BT006IGS**OBJECTIVE: EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD****DRAFT PROTOCOL:** 31/03/2025**EPPO/GUIDES:** PP1/181(5), PP1/135(4), PP1/152(4), TS 17724:2022**Crop** Olive**Localization** Semi-field (SICOP facilities)**Number of trials** 1

1. EXPERIMENTAL DESIGN

Experimental design Completely randomized blocks**Repetitions** 4**Plot size** 7 plants**Type of application** Irrigation**Special Requirements** DORIAN SOFTWARE and EDATool

2. LIST OF TREATMENTS AND APPLICATIONS

THESIS	TREATMENT	DOSE	APPLICATIONS
T1	Water	-	1A: 10 DAT 2A: 30 DAT 3A: 60 DAT
S2	FORMULATION B	1A: 200g/100L 2A and 3A: 5kg/ha	1A: 10 DAT 2A: 30 DAT 3A: 60 DAT
S3	CEPACET	2 L/ha	1A: 10 DAT 2A: 30 DAT 3A: 60 DAT

3 APPLICATIONS

1A: 10 days after transplant (10 DAT)
2A: 30 days after transplant (30 DAT)
3A: 60 days after transplant (60 DAT)

3. EVALUATIONS

3 EVALUATIONS

E1 (10 DAT). Shoot length.
E2 (30 DAT): Leaf area (2 rep leaves/plants), vigour and shoot length.
E3 (60 DAT): Leaf area (2 rep leaves/plants), vigour and shoot length.
E4 (80 DAT): Leaf area (2 rep leaves/plants), vigour, shoot length. Shoot and root biomass (3 rep/plants).

4. INFORMATION AND VISITS

The promoter (in this case the consortium) will receive timely information, via e-mail, of the opening of the trial, action plan and evaluation results. Guided visits to the trial can be made at the consortium's convenience.

5. COMPLEMENTARY DATA

Temperature and humidity for the entire trial period collected by means of a datalogger placed in the trial plot.

Any other information that the experimenter considers relevant to the trial or additional information requested by the consortium.

6. FINAL REPORT

The final report will accurately reflect the data obtained during the study and will be delivered to the consortium in PDF format. The final report will include the corresponding ARM file.

8. MODIFICATIONS AND DEVIATIONS FROM THE PROTOCOL

If in the future any modification of this protocol is considered necessary and justifiable, such modification shall be made by prior agreement between the persons responsible for the consortium activity and SICOP.

Any deviation from the protocol that may occur during the trial must be included in the final report.

9. CONFIDENTIALITY

SICOP S.L. guarantees total confidentiality on the work in progress and the results obtained.

ARM 2025.2 Site Description Page 1 of 13

EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD

Org. Type:Company

PRODUCTION CONTROL SYSTEMS

Crop 1:C OLVEU Olea europaea			Crop Description		BBCH Scale:BP
Entry Date:17/Jul/2025			common olive		
Variety:Marteño Picual			Stage Scale:BBCH		
Planting Date:2/Apr/2025			Planting Rate:1666		P/ha
Row Spacing:4 m			Planting Method:TRAHAN		Transplanted - Hand
Spacing within Row:1,5 m					

Site and Design					
Treated Plot Width:4 m			Site Type:COUPLET		
Treated Plot Length:1,5 m			S cup, plastic		
Treated Plot Area:6,0 m2			Experimental Unit:1 PLOT		
Replications:4			Tillage Type:NOTILL		
Treatments:3			no-till		
Plots:12			Study Design:RACOB		
Distance between Blocks:0 m			Randomized Complete Block (R)		
Distance between 'Plot' Experimental Units:0 m					

Weather Conditions	
Irrigation Type:DRIPS Drip Irrigation System	
Distance:0 m	
Weather Station Name:Edatool	

No.	Date	Min Temp	Max Temp	Avg Temp	Temp Unit	Min % Relative Humidity	Max % Relative Humidity	Avg % Relative Humidity
1.	24/Mar/2025	12	20	17,05	C	64	71	66,7
2.	Mar/25/2025	12	25	17,13	C	59	71	64,1
3.	Mar/26/2025	11	24	17,15	C	60	69	66,4
4.	Mar/27/2025	14	25	19,02	C	59	70	64,7
5.	Mar/28/2025	13	27	19,23	C	59	72	65,6
6.	Mar/29/2025	15	28	20,48	C	52	72	60,9
7.	Mar/30/2025	13	28	19,21	C	54	72	63,5
8.	Mar/31/2025	11	29	18,46	C	49	72	61,9
9.	1/Apr/2025	11	24	18,06	C	55	69	60,4
10.	2/Apr/2025	13	27	19,73	C	60	73	67,2
11.	3/Apr/2025	17	24	19,73	C	67	77	72,8
12.	4/Apr/2025	16	26	19,63	C	70	82	75,8
13.	5/Apr/2025	13	23	18,9	C	66	79	71,2
14.	6/Apr/2025	14	29	19,79	C	57	70	64,5
15.	7/Apr/2025	17	30	22,35	C	51	65	59,5
16.	8/Apr/2025	14	35	23,52	C	41	64	52,8
17.	9/Apr/2025	16	29	21,15	C	53	65	56,8
18.	10/Apr/2025	17	26	20,52	C	58	69	64,4
19.	11/Apr/2025	16	26	20,02	C	65	75	69,5
20.	12/Apr/2025	16	20	17,85	C	76	83	80,7
21.	13/Apr/2025	15	25	19,08	C	74	84	80,2
22.	14/Apr/2025	13	24	18,9	C	71	84	78,2
23.	15/Apr/2025	13	22	17,48	C	62	81	71,3
24.	16/Apr/2025	13	26	17,71	C	47	64	57,8
25.	17/Apr/2025	15	23	19,25	C	62	74	66,8
26.	18/Apr/2025	15	28	20,1	C	65	75	69,4
27.	19/Apr/2025	15	27	19,92	C	47	77	63,3
28.	20/Apr/2025	13	27	18,48	C	52	66	56,5
29.	21/Apr/2025	13	25	19,33	C	61	70	65,6
30.	22/Apr/2025	14	25	19,06	C	64	73	68,1
31.	23/Apr/2025	13	33	21,44	C	55	76	67,7
32.	24/Apr/2025	14	30	21,06	C	51	73	63,8

PRODUCTION CONTROL SYSTEMS

No.	Date	Min Temp	Max Temp	Avg Temp	Temp Unit	Min % Relative Humidity	Max % Relative Humidity	Avg % Relative Humidity
33.	25/Apr/2025	17	27	21,73	C	53	66	60
34.	26/Apr/2025	15	28	20,88	C	60	72	66,5
35.	27/Apr/2025	15	31	22,73	C	53	78	65,8
36.	28/Apr/2025	15	31	20,3	C	49	71	63,6
37.	29/Apr/2025	15	26	20,3	C	60	72	65,9
38.	30/Apr/2025	16	31	21,29	C	59	76	69,4
39.	1/May/2025	19	30	22,73	C	62	75	70,5
40.	2/May/2025	18	29	22,33	C	61	79	72,1
41.	3/May/2025	15	27	21,1	C	62	72	67,5
42.	4/May/2025	17	25	20,65	C	62	72	68,5
43.	5/May/2025	18	25	20,85	C	65	72	68,9
44.	6/May/2025	17	26	22	C	63	72	65,9
45.	7/May/2025	16	29	21,85	C	63	75	69,9
46.	8/May/2025	16	25	20,38	C	65	76	71,6
47.	9/May/2025	15	27	21,73	C	63	73	66,5
48.	10/May/2025	16	29	21,69	C	64	75	70
49.	11/May/2025	15	26	20,81	C	59	73	67,3
50.	12/May/2025	17	27	22,31	C	54	65	58,3
51.	13/May/2025	15	26	20,35	C	62	71	66,2
52.	14/May/2025	15	27	20,08	C	61	75	69,3
53.	15/May/2025	15	27	20,67	C	61	78	69
54.	16/May/2025	15	29	21,58	C	62	74	66,7
55.	17/May/2025	16	31	23	C	53	71	61,9
56.	18/May/2025	16	30	22,98	C	54	66	59,9
57.	19/May/2025	17	29	23,13	C	49	70	63
58.	20/May/2025	19	34	26,67	C	45	62	50,8
59.	21/May/2025	16	31	23,71	C	55	64	59,4
60.	22/May/2025	16	30	23,25	C	56	67	61,7
61.	23/May/2025	18	28	22,02	C	64	75	68,9
62.	24/May/2025	16	29	22,19	C	61	79	70,7
63.	25/May/2025	17	33	24,15	C	47	72	60,8
64.	26/May/2025	15	33	24,06	C	52	69	59,4
65.	27/May/2025	18	33	25,98	C	47	57	52,1
66.	28/May/2025	19	34	25,52	C	52	65	57,8
67.	29/May/2025	20	39	26,5	C	46	67	58,5
68.	30/May/2025	22	36	28,65	C	47	66	53,6
69.	31/May/2025	21	36	28,73	C	38	64	49,4
70.	Jun/1/2025	21	38	28,13	C	44	66	55,3
71.	Jun/2/2025	20	34	26,21	C	54	67	61,2
72.	Jun/3/2025	18	28	22,67	C	62	71	65,4
73.	Jun/4/2025	18	28	22,65	C	62	75	69,2
74.	Jun/5/2025	15	30	23,02	C	62	78	70,8
75.	Jun/6/2025	16	32	23,83	C	59	77	68,7
76.	Jun/7/2025	18	33	25,19	C	56	77	69
77.	Jun/8/2025	21	35	27,1	C	56	75	66
78.	Jun/9/2025	22	29	24,85	C	72	79	75,1

PRODUCTION CONTROL SYSTEMS

No.	Date	Min Temp	Max Temp	Avg Temp	Temp Unit	Min % Relative Humidity	Max % Relative Humidity	Avg % Relative Humidity
79.	Jun/10/2025	21	33	25,2	C	67	80	75
80.	Jun/11/2025	22	31	26,23	C	64	74	69,5
81.	Jun/12/2025	20	31	24,85	C	65	79	72,9
82.	Jun/13/2025	21	34	26,52	C	64	79	71,9
83.	Jun/14/2025	22	36	27,54	C	62	78	71,3
84.	Jun/15/2025	22	36	28,13	C	60	78	71,3
85.	Jun/16/2025	24	35	28,14	C	64	78	72
86.	Jun/17/2025	23	37	29,25	C	57	77	68,3
87.	Jun/18/2025	22	37	29	C	54	76	66,2
88.	Jun/19/2025	20	30	24,61	C	62	80	70,6
89.	Jun/20/2025	22	34	27,3	C	64	76	71,3
90.	Jun/21/2025	24	34	28,5	C	66	80	73,9
91.	Jun/22/2025	21	32	25,88	C	66	76	71,5
92.	Jun/23/2025	22	34	27,3	C	54	78	66,4
93.	Jun/24/2025	22	38	29,45	C	60	76	67,2

Application Description

	To	B	C
Date	11/Apr/2025	2/May/2025	Jun/2/2025
Start Time	13:00	12:35	10:30
Stop Time	13:22	12:40	10:42
Interval to Prev. Appl.		21 DAYS	31 DAYS
Method	IRDAMN IT	IRDAMN IT	IRDAMN IT
Timing	ACCRST	ACCRST	ACCRST
Placement	WATER	WATER	WATER
Mixed/Prepared By	Jorge De La O Sánchez	Jorge De La O Sánchez	Jorge De La O Sánchez
Applied By	Jorge De La O Sánchez	Jorge De La O Sánchez	Jorge De La O Sánchez
Entry Date	17/Jul/2025	17/Jul/2025	17/Jul/2025
Air Temperature Start, Stop	24,4; 24.9 C	24,7; 28 C	30; 35.8 C
% Relative Humidity Start, Stop	68; 68	68; 67	40; 53
Problems with Application?	N; -	N; -	

PRODUCTION CONTROL SYSTEMS

Crop Stage At Each Application

	To	B	C
Crop 1 Code, BBCH Scale	OLVEU; BPER	OLVEU; BPER	OLVEU; BPER
Stage Scale Used	BBCH	BBCH	BBCH
Stage Majority, Percent	15; 100	19; 100	69; 100
Diameter Average	0.1 m	0.13 m	0.21 m
Height Average	0.74 m	0.76 m	0.9454 m
Total Canopy Height	0.74 m	0.76 m	0.9454 m
Treated Canopy Height	0.74 m	0.76 m	0.9454 m
Treated Leaf Wall Area	3700 m2/ha	3800 m2/ha	4727 m2/ha
Treated LWA Formula	$2*0.74*10000/4$	$2*0.76*10000/4$	$2*0.9454*10000/4$
Treated LWA per Plot	2.22 m2/plot	2.28 m2/plot	2.84 m2/plot
Total Leaf Wall Area	3700 m2/ha	3800 m2/ha	4727 m2/ha
Total LWA Formula	$2*0.74*10000/4$	$2*0.76*10000/4$	$2*0.9454*10000/4$
Treated Tree Row Volume	185 m3/ha	247 m3/ha	496 m3/ha
Treated TRV Formula	$(0.74*0.1*10000)/4$	$(0.76*0.13*10000)/4$	$(0.9454*0.21*10000)/4$
Treated TRV per Plot	0.11 m3/plot	0.15 m3/plot	0.3 m3/plot
Total Tree Row Volume (m3/ha)	185,0	247,0	496,34
Coverage	100 %	100 %	100 %

Application Equipment

	To	B	C
Row Sides Applied	2	2	2
Carrier	WATER	WATER	WATER
Minimum Mix/Treatment	0.48 L	0.48 L	0.48 L

Notes

No.	Context	Date	Time	By	Notes
1.	STATUS	17/Jul/2025	8:13	Ana Orrico Marin	Automatically added by ARM: Trial Status updated to 'S' during trial creation by (XUNMAA).
2.	STATUS	17/Jul/2025	8:14	Ana Orrico Marin	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date was entered by (XUNMAA).
3.	STATUS	Jul/18/2025	7:22	Ana Orrico Marin	Automatically added by ARM: Status changed to: F: changed by (XUNMAA).

SE Definitions

	1.	2.	3.	4.	5.	6.
SE Name	D011	X001	O014	CRS011	Y303	Y304
SE Description	Normalized difference vegetation index (NDVI)	% General phyton on plants (all symptoms)	Length of shoot	Leaf Area Index (LAI)	Aboveground biomass fresh weight	Root fresh weight
Part Assessed	CANOPY; -	PLANT; -	SHOOT; -	CANOPY; -	CANOPY; -	ROOT; -
Assessment Type	NDVI	PHYGEN	LENGTH	LAI	WEIFRE	WEIFRE
Assessment Unit	-1-1	%	CM	INDEX	g	g
Assessment Min/Max/Interval	-1; 1; -	0; 100; -				
Sample Size	1 READNG	1 PLOT	- SHOOT	1 READNG	-PLANT	-PLANT
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 PLOT	1 SHOOT	1 PLOT	1 PLANT	1 PLANT
Calculation	IN	NC	IN		IN	IN
Number of Subsamples	1				1	1

PRODUCTION CONTROL SYSTEMS

EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD

Trial ID:SI25BT006IGS01 Official Trial ID:SI25BT006IGS01
Protocol ID:SI25BT006IGS Location:Salobreña (Granada) Trial Year:2025
Study Director:Ana Orrico Marín Sponsor Contact:Symbiagro S.r.l Conducted Under GEP:Yes
Investigator:Jorge De La O Sánchez

Rep	Blk						
4	4	401	2	402	3	403	1
3	3	301	3	302	1	303	2
2	2	201	2	202	3	203	1
1	1	101	1	102	2	103	3

Trt No.	Type	Treatment Name	Form Type	Description	Rate	Rate Unit	Appl Code	Appl Description	Appl Timing	Comment
1	CHK	Untreated check		Irrigation with water			ABC			
2	Biostim	FORMULATION B	SC		2G	ai/l	To	Irrigation	ACCRST	10 Days after transplant
	Biostim	FORMULATION B	SC		5kg	ai/ha	BC	Irrigation	ACCRST	2A: BBCH11 and 3A:BBCH53
3	Biostim	CEPACET	SC		2l	/ha	ABC	Irrigation	ACCRST	1A: 10 Days after transplant, 2A: BBCH11 and 3A:BBCH53

Additional Treatment Information
Type
CHK = Check or Untreated
BIOSTIM = Biostimulant
Form Type
SC = suspension concentrate (= flowable concentrate)|Liquid||A stable suspension of active ingredient(s) in water, intended for dilution with water before use.
Rate Unit
g AI/L = Grams Active Ingredient per Liter Mix (US=g AI/GAL)|IP
kg AI/ha = Kilograms Active Ingredient per Hectare (US=kg AI/A)|GV
L/ha = Liters Product per Hectare (US=GAL/A)|T
Appl Timing
ACCRST = according crop stage

Replications: 4, Untreated treatments: 1, Conduct under GLP/GEP: Yes (GEP with no protection), Design: Randomised Complete Block (RCB), Treatment units: Treated 'Plot' experimental unit size, Dry Form. Unit: %, Treated 'Plot' experimental unit size Width: 4 meters, Treated 'Plot' experimental unit size Length: 1.5 meters, Application amount: 200 L/ha, Mix size: 0.48 L, Format definitions: G-AII7.def, G-AII7.frm

Jul/18/2025 (SI25BT006IGS01)

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PRODUCTION CONTROL SYSTEMS

EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD

Trial ID:SI25BT006IGS01 Official Trial ID:SI25BT006IGS01
 Protocol ID:SI25BT006IGS Location:Salobreña (Granada) Trial Year:2025
 Study Director:Ana Orrico Marín Sponsor Contact:Symbiagro S.r.l Conducted Under GEP:Yes
 Investigator:Jorge De La O Sánchez

Assessed By	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco
Assessment Date	2/May/2025	Jun/1/2025	Jun/21/2025	2/May/2025	Jun/1/2025
SE Group No.	1	2	2	4	5
SE Name	X001	X001	X001	D011	D011
SE Description	% General phyto>	% General phyto>	% General phyto>	Normalized diff>	Normalized diff>
Part Assessed	PLANT; C	PLANT; C	PLANT; C	CANOPY; C	CANOPY; C
Assessment Type	PHYGEN	PHYGEN	PHYGEN	NDVI	NDVI
Assessment Unit	%	%	%	-1-1	-1-1
Assessment Min/Max/Interval	0; 100; -	0; 100; -	0; 100; -	-1; 1; -	-1; 1; -
Sample Size	1 PLOT	1 PLOT	1 PLOT	1 READNG	1 READNG
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Calculation	NC	NC	NC	IN	IN
Number of Subsamples	1	1	1	7	7
Crop Type, Code	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU
BBCH Scale	BPER	BPER	BPER	BPER	BPER
Crop Scientific Name	Olea europaea	Olea europaea	Olea europaea	Olea europaea	Olea europaea
Crop Name	common olive	common olive	common olive	common olive	common olive
Crop Variety	Martefia picual	Martefia picual	Martefia picual	Martefia picual	Martefia picual
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	19; 19; 19	69; 69; 69	70; 70; 70	19; 19; 19	69; 69; 69
Crop Diameter Average	0.13 m	0.21 m	0.22 m	0.13 m	0.21 m
Crop Height Average	0.76 m	0.9454 m	0.97 m	0.76 m	0.9454 m
Days After First/Last Appl.	21; 21	51; 30	71; 19	21; 21	51; 30
Treatment Appl. Interval	21 DA-A	51 DA-A	71 DA-A	21 DA-A	30 DA-B
Planting Interval	30 DP-1	60 DP-1	80 DP-1	30 DP-1	60 DP-1
Description	Phytotoxicity	Phytotoxicity	Phytotoxicity	NDVI	NDVI
Number of Decimals	2	2	2	2	2
Data Entry Date	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025
Trt Treatment	1*	2*	3*	4*	5*
No. Name	Rate Unit				
1 Untreated check	0,00Na	0,00Na	0,00Na	0,05to	0,06b
2 FORMULATION B	0,00Na	0,00Na	0,00Na	0,06to	0,08to
FORMULATION B	2G ai/l				
3 CEPACET	0,00Na	0,00Na	0,00Na	0,05to	0,07b
	2l/ha				
LSD P=.15	.	.	.	0,010	0,006
Standard Deviation	0,000	0,000	0,000	0,009	0,005
CV	0,0	0,0	0,0	17,63	7,13
Grand Mean	0,000	0,000	0,000	0,050	0,071
Bartlett's X2^	.	.	.	2,113	1,259
P(Bartlett's X2)	.	.	.	0,348	0,533
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Shapiro-Wilk^	.	.	.	0,9517	0,9682
P(Shapiro-Wilk)^	.	.	.	0,6625	0,8907
Skewness^	.	.	.	0,4598	0,343
P(Skewness)^	.	.	.	0,5331	0,6406
Kurtosis^	.	.	.	-0,546	0,3563
P(Kurtosis)^	.	.	.	0,7003	0,8012
Replicate F	Nan	Nan	Nan	1,071	1,242
Replicate Prob(F)	Nan	Nan	Nan	0,4289	0,3744
Treatment F	Nan	Nan	Nan	1,536	24,651
Treatment Prob(F)	Nan	Nan	Nan	0,2894	0,0013

Means followed by same letter or symbol do not significantly differ (P=.15, Student-Newman-Keuls).

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

* Adjusted means

Could not calculate LSD (% mean diff) or mean separation letters for columns 1,2,3 because error variance is 0.

Mean separation letters are 'na' (not applicable) when error variance is 0

^Calculated from residual.

PRODUCTION CONTROL SYSTEMS

Assessed By	Daniel Franco	Jorge De La O S>	Jorge De La O S>	Jorge De La O S>	Jorge De La O S>
Assessment Date	Jun/21/2025	12/Apr/2025	2/May/2025	Jun/1/2025	Jun/21/2025
SE Group No.	6	7	8	9	10
SE Name	D011	O014	O014	O014	O014
SE Description	Normalized diff>	Length of shoot	Length of shoot	Length of shoot	Length of shoot
Part Assessed	CANOPY; C	SHOOT; C	SHOOT; C	SHOOT; C	SHOOT; C
Assessment Type	NDVI	LENGTH	LENGTH	LENGTH	LENGTH
Assessment Unit	-1; 1	CM	CM	CM	CM
Assessment Min/Max/Interval	-1; 1; -				
Sample Size	1 READNG	1 SHOOT	1 SHOOT	1 SHOOT	1 SHOOT
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 SHOOT	1 SHOOT	1 SHOOT	1 SHOOT
Calculation	IN	IN	IN	IN	IN
Number of Subsamples	7	7	7	7	7
Crop Type, Code	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU
BBCH Scale	BPER	BPER	BPER	BPER	BPER
Crop Scientific Name	Olea europaea	Olea europaea	Olea europaea	Olea europaea	Olea europaea
Crop Name	common olive	common olive	common olive	common olive	common olive
Crop Variety	Marteña picual	Marteña picual	Marteña picual	Marteña picual	Marteña picual
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	70; 70; 70	15; 15; 15	19; 19; 19	69; 69; 69	70; 70; 70
Crop Diameter Average	0.22 m	0.12 m	0.13 m	0.21 m	0.22 m
Crop Height Average	0.97 m	0.74 m	0.76 m	0.9454 m	0.97 m
Days After First/Last Appl.	71; 19	1; 1	21; 21	51; 30	71; 19
Treatment Appl. Interval	19 DA-C	1 DA-A	21 DA-A	30 DA-B	19 DA-C
Planting Interval	80 DP-1	10 DP-1	30 DP-1	60 DP-1	80 DP-1
Description	NDVI	Shoot Length	Shoot Length	Shoot Length	Shoot Length
Number of Decimals	2	2	2	2	2
Data Entry Date	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025
Trt Treatment	6*	7*	8*	9*	10*
No. Name	Rate Unit				
1 Untreated check	0,14to	72,07to	80,04c	93,25to	111,18b
2 FORMULATION B	2G ai/l	73,93to	82,61to	96,25to	116,82to
FORMULATION B	5kg ai/ha				
3 CEPACET	2l/ha	73,89to	81,11b	94,11to	115,04to
LSD P=.15	0,016	2,238	0,906	3,402	3,136
Standard Deviation	0,014	1,918	0,777	2,916	2,687
CV	9,21	2,62	0,96	3,08	2,35
Grand Mean	0,153	73,298	81,250	94,536	114,345
Bartlett's X2^	0,195	0,723	0,363	0,217	3,454
P(Bartlett's X2)	0,907	0,697	0,834	0,897	0,178
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Shapiro-Wilk^	0,9239	0,9389	0,9491	0,8969	0,9635
P(Shapiro-Wilk)^	0,3201	0,4835	0,6237	0,1447	0,8319
Skewness^	0,6681	0,4907	0,0135	0,7074	0,3674
P(Skewness)^	0,3699	0,5065	0,9853	0,3435	0,6174
Kurtosis^	-0,7645	-0,5002	-0,9838	-0,7648	0,32
P(Kurtosis)^	0,5911	0,7242	0,4913	0,591	0,8211
Replicate F	2,361	1,166	1,454	4,074	0,493
Replicate Prob(F)	0,1706	0,3974	0,3180	0,0677	0,7004
Treatment F	1,795	1,226	11,064	1,123	4,607
Treatment Prob(F)	0,2449	0,3577	0,0097	0,3851	0,0613

Means followed by same letter or symbol do not significantly differ (P=.15, Student-Newman-Keuls).

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

* Adjusted means

Could not calculate LSD (% mean diff) or mean separation letters for columns 1,2,3 because error variance is 0.

Mean separation letters are 'na' (not applicable) when error variance is 0

^Calculated from residual.

Jul/18/2025 (SI25BT006IGS01)

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PRODUCTION CONTROL SYSTEMS

Assessed By	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco
Assessment Date	2/May/2025	Jun/1/2025	Jun/21/2025	Jun/21/2025	Jun/21/2025
SE Group No.	12	11	11	13	14
SE Name	CRS011	CRS011	CRS011	Y303	Y304
SE Description	Leaf Area	Leaf Area	Leaf Area	Aboveground bio>	Root fresh weig>
Part Assessed	AREA; C	AREA; C	AREA; C	CANOPY; C	ROOT; -
Assessment Type	AREA	AREA	AREA	WEIFRE	WEIFRE
Assessment Unit	cm2	cm2	cm2	g	g
Assessment Min/Max/Interval					
Sample Size	1 LEAF	1 LEAF	1 LEAF	1 PLANT	1 PLANT
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 LEAF	1 LEAF	1 LEAF	1 PLANT	1 PLANT
Calculation				IN	IN
Number of Subsamples	14	14	14	7	7
Crop Type, Code	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU
BBCH Scale	BPER	BPER	BPER	BPER	BPER
Crop Scientific Name	Olea europaea	Olea europaea	Olea europaea	Olea europaea	Olea europaea
Crop Name	common olive	common olive	common olive	common olive	common olive
Crop Variety	Martaña picual	Martaña picual	Martaña picual	Martaña picual	Martaña picual
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	19; 19; 19	69; 69; 69	70; 70; 70	70; 70; 70	70; 70; 70
Crop Diameter Average	0.13 m	0.21 m	0.22 m	0.22 m	0.22 m
Crop Height Average	0.76 m	0.9454 m	0.97 m	0.97 m	0.97 m
Days After First/Last Appl.	21; 21	51; 30	71; 19	71; 19	71; 19
Treatment Appl. Interval	21 DA-A	30 DA-B	19 DA-C	19 DA-C	19 DA-C
Planting Interval	30 DP-1	60 DP-1	80 DP-1	80 DP-1	80 DP-1
Description	Leaf area	Leaf area	Leaf area	Aboveground bio>	Root fresh
Number of Decimals	2	2	2	2	2
Data Entry Date	Jul/18/2025	Jul/18/2025	Jul/18/2025	Jul/18/2025	Jul/18/2025
Trt Treatment	11*	12*	13*	14*	15*
No. Name	Rate Unit				
1 Untreated check					
2 FORMULATION B	2G ai/l				
FORMULATION B	5kg ai/ha				
3 CEPACET	2l/ha				
LSD P=.15	0,101	0,200	0,330	8,985	6,044
Standard Deviation	0,086	0,171	0,283	7,700	5,179
CV	3,76	6,35	7,74	8,87	15,8
Grand Mean	2,298	2,694	3,651	86,810	32,786
Bartlett's X2^	0,158	1,886	0,485	1,548	0,834
P(Bartlett's X2)	0,924	0,389	0,785	0,461	0,659
Rank X2	.	.	.	.	.
P(Rank X2)	.	.	.	.	.
Shapiro-Wilk^	0,9313	0,9797	0,9387	0,9468	0,9743
P(Shapiro-Wilk)^	0,3938	0,9823	0,4813	0,5907	0,9503
Skewness^	-0,1794	0,062	-0,4608	0,7659	0,0792
P(Skewness)^	0,8064	0,9324	0,5323	0,3068	0,9138
Kurtosis^	-1,252	-0,6289	-0,8601	0,2009	-0,2949
P(Kurtosis)^	0,3843	0,6578	0,5463	0,887	0,8349
Replicate F	0,020	1,943	2,656	0,198	0,019
Replicate Prob(F)	0,9957	0,2240	0,1425	0,8939	0,9959
Treatment F	2,757	1,002	1,014	14,729	0,868
Treatment Prob(F)	0,1415	0,4212	0,4175	0,0048	0,4666

Means followed by same letter or symbol do not significantly differ (P=.15, Student-Newman-Keuls).

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

* Adjusted means

Could not calculate LSD (% mean diff) or mean separation letters for columns 1,2,3 because error variance is 0.

Mean separation letters are 'na' (not applicable) when error variance is 0

^Calculated from residual.

PRODUCTION CONTROL SYSTEMS

EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD

Trial ID:SI25BT006IGS01 Official Trial ID:SI25BT006IGS01
 Protocol ID:SI25BT006IGS Location:Salobreña (Granada) Trial Year:2025
 Study Director:Ana Orrico Marín Sponsor Contact:Symbiagro S.r.l Conducted Under GEP:Yes
 Investigator:Jorge De La O Sánchez

Assessed By	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco
Assessment Date	2/May/2025	Jun/1/2025	Jun/21/2025	2/May/2025	Jun/1/2025
SE Group No.	1	2	2	4	5
SE Name	X001	X001	X001	D011	D011
SE Description	% General phyto>	% General phyto>	% General phyto>	Normalized diff>	Normalized diff>
Part Assessed	PLANT; C	PLANT; C	PLANT; C	CANOPY; C	CANOPY; C
Assessment Type	PHYGEN	PHYGEN	PHYGEN	NDVI	NDVI
Assessment Unit	%	%	%	-1-1	-1-1
Assessment Min/Max/Interval	0; 100; -	0; 100; -	0; 100; -	-1; 1; -	-1; 1; -
Sample Size	1 PLOT	1 PLOT	1 PLOT	1 READNG	1 READNG
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Calculation	NC	NC	NC	IN	IN
Number of Subsamples	1	1	1	7	7
Crop Type, Code	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU
BBCH Scale	BPER	BPER	BPER	BPER	BPER
Crop Scientific Name	Olea europaea	Olea europaea	Olea europaea	Olea europaea	Olea europaea
Crop Name	common olive	common olive	common olive	common olive	common olive
Crop Variety	Martefia picual	Martefia picual	Martefia picual	Martefia picual	Martefia picual
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	19; 19; 19	69; 69; 69	70; 70; 70	19; 19; 19	69; 69; 69
Crop Diameter Average	0.13 m	0.21 m	0.22 m	0.13 m	0.21 m
Crop Height Average	0.76 m	0.9454 m	0.97 m	0.76 m	0.9454 m
Days After First/Last Appl.	21; 21	51; 30	71; 19	21; 21	51; 30
Treatment Appl. Interval	21 DA-A	51 DA-A	71 DA-A	21 DA-A	30 DA-B
Planting Interval	30 DP-1	60 DP-1	80 DP-1	30 DP-1	60 DP-1
Description	Phytotoxicity	Phytotoxicity	Phytotoxicity	NDVI	NDVI
Number of Decimals	2	2	2	2	2
Data Entry Date	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025
Trt Treatment	Rate				
No. Name	Rate Unit	Plot			
1 Untreated check		1	2	3	4
		101	203	302	403
		0,00	0,00	0,00	0,05
		0,00	0,00	0,00	0,05
		0,00	0,00	0,00	0,04
		0,00	0,00	0,00	0,05
	Mean =	0,00	0,00	0,00	0,06
2 FORMULATION B	2G ai/l	102	201	303	401
		0,00	0,00	0,00	0,05
		0,00	0,00	0,00	0,05
		0,00	0,00	0,00	0,05
		0,00	0,00	0,00	0,05
	Mean =	0,00	0,00	0,00	0,06
3 CEPACET	2l/ha	103	202	301	402
		0,00	0,00	0,00	0,05
		0,00	0,00	0,00	0,06
		0,00	0,00	0,00	0,04
		0,00	0,00	0,00	0,05
	Mean =	0,00	0,00	0,00	0,07

PRODUCTION CONTROL SYSTEMS

Assessed By	Daniel Franco	Jorge De La O S>	Jorge De La O S>	Jorge De La O S>	Jorge De La O S>
Assessment Date	Jun/21/2025	12/Apr/2025	2/May/2025	Jun/1/2025	Jun/21/2025
SE Group No.	6	7	8	9	10
SE Name	D011	O014	O014	O014	O014
SE Description	Normalized diff>	Length of shoot	Length of shoot	Length of shoot	Length of shoot
Part Assessed	CANOPY; C	SHOOT; C	SHOOT; C	SHOOT; C	SHOOT; C
Assessment Type	NDVI	LENGTH	LENGTH	LENGTH	LENGTH
Assessment Unit	-1; 1	CM	CM	CM	CM
Assessment Min/Max/Interval	-1; 1; -				
Sample Size	1 READNG	1 SHOOT	1 SHOOT	1 SHOOT	1 SHOOT
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 SHOOT	1 SHOOT	1 SHOOT	1 SHOOT
Calculation	IN	IN	IN	IN	IN
Number of Subsamples	7	7	7	7	7
Crop Type, Code	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU
BBCH Scale	BPER	BPER	BPER	BPER	BPER
Crop Scientific Name	Olea europaea	Olea europaea	Olea europaea	Olea europaea	Olea europaea
Crop Name	common olive	common olive	common olive	common olive	common olive
Crop Variety	Martaña picual	Martaña picual	Martaña picual	Martaña picual	Martaña picual
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	70; 70; 70	15; 15; 15	19; 19; 19	69; 69; 69	70; 70; 70
Crop Diameter Average	0.22 m	0.12 m	0.13 m	0.21 m	0.22 m
Crop Height Average	0.97 m	0.74 m	0.76 m	0.9454 m	0.97 m
Days After First/Last Appl.	71; 19	1; 1	21; 21	51; 30	71; 19
Treatment Appl. Interval	19 DA-C	1 DA-A	21 DA-A	30 DA-B	19 DA-C
Planting Interval	80 DP-1	10 DP-1	30 DP-1	60 DP-1	80 DP-1
Description	NDVI	Shoot Length	Shoot Length	Shoot Length	Shoot Length
Number of Decimals	2	2	2	2	2
Data Entry Date	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025	17/Jul/2025
Trt Treatment	Rate				
No. Name	Rate Unit Plot				
1 Untreated check		6	7	8	9
					10
		0,13	72,00	80,43	89,71
		0,15	71,14	80,14	95,71
		0,15	71,43	79,86	95,43
		0,15	73,71	79,71	92,14
	Mean =	0,14	72,07	80,04	93,25
2 FORMULATION B	2G ai/l	0,14	76,00	82,29	95,57
FORMULATION B	5kg ai/ha	0,17	73,00	83,43	100,29
		0,15	73,00	81,29	92,43
		0,19	73,71	83,43	96,71
	Mean =	0,16	73,93	82,61	96,25
3 CEPACET	2l/ha	0,17	74,43	80,86	91,14
		0,15	77,14	82,43	102,71
		0,13	70,14	81,00	91,29
		0,17	73,86	80,14	91,29
	Mean =	0,15	73,89	81,11	94,11

PRODUCTION CONTROL SYSTEMS

Assessed By	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco	Daniel Franco
Assessment Date	2/May/2025	Jun/1/2025	Jun/21/2025	Jun/21/2025	Jun/21/2025
SE Group No.	12	11	11	13	14
SE Name	CRS011	CRS011	CRS011	Y303	Y304
SE Description	Leaf Area	Leaf Area	Leaf Area	Aboveground bio>	Root fresh weig>
Part Assessed	AREA; C	AREA; C	AREA; C	CANOPY; C	ROOT; -
Assessment Type	AREA	AREA	AREA	WEIFRE	WEIFRE
Assessment Unit	cm2	cm2	cm2	g	g
Assessment Min/Max/Interval					
Sample Size	1 LEAF	1 LEAF	1 LEAF	1 PLANT	1 PLANT
Collection Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 LEAF	1 LEAF	1 LEAF	1 PLANT	1 PLANT
Calculation				IN	IN
Number of Subsamples	14	14	14	7	7
Crop Type, Code	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU	C; OLVEU
BBCH Scale	BPER	BPER	BPER	BPER	BPER
Crop Scientific Name	Olea europaea	Olea europaea	Olea europaea	Olea europaea	Olea europaea
Crop Name	common olive	common olive	common olive	common olive	common olive
Crop Variety	Marteña picual	Marteña picual	Marteña picual	Marteña picual	Marteña picual
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	19; 19; 19	69; 69; 69	70; 70; 70	70; 70; 70	70; 70; 70
Crop Diameter Average	0.13 m	0.21 m	0.22 m	0.22 m	0.22 m
Crop Height Average	0.76 m	0.9454 m	0.97 m	0.97 m	0.97 m
Days After First/Last Appl.	21; 21	51; 30	71; 19	71; 19	71; 19
Treatment Appl. Interval	21 DA-A	30 DA-B	19 DA-C	19 DA-C	19 DA-C
Planting Interval	30 DP-1	60 DP-1	80 DP-1	80 DP-1	80 DP-1
Description	Leaf area	Leaf area	Leaf area	Aboveground bio>	Root fresh
Number of Decimals	2	2	2	2	2
Data Entry Date	Jul/18/2025	Jul/18/2025	Jul/18/2025	Jul/18/2025	Jul/18/2025
Trt Treatment	Rate				
No. Name	Rate Unit	Plot			
		11	12	13	14
1 Untreated check		101 2,14	2,50	3,49	70,29
		203 2,21	2,72	2,92	79,00
		302 2,28	2,73	3,98	84,71
		403 2,26	2,61	3,68	74,71
	Mean =	2,22	2,64	3,52	77,18
2 FORMULATION B	2G ai/l	102 2,40	3,07	3,27	116,29
FORMULATION B	5kg ai/ha	201 2,47	2,94	3,78	101,71
		303 2,32	2,57	4,01	97,00
		401 2,28	2,59	4,14	100,29
	Mean =	2,37	2,79	3,80	103,82
3 CEPACET	2l/ha	103 2,37	2,70	3,69	76,71
		202 2,22	2,88	3,39	86,00
		301 2,31	2,62	3,69	77,00
		402 2,32	2,39	3,77	78,00
	Mean =	2,30	2,65	3,64	79,43

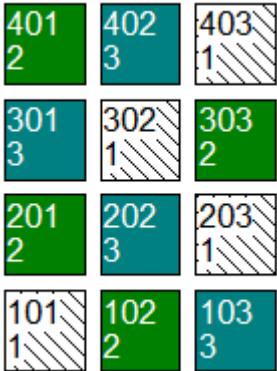
PRODUCTION CONTROL SYSTEMS

EVALUATION OF THE BIOSTIMULANT EFFECT OF PRODUCTS BASED ON MICROORGANISMS ON OLIVE IN SEMI-FIELD

Trial ID:SI25BT006IGS01 Official Trial ID:SI25BT006IGS01
Protocol ID:SI25BT006IGS Location:Salobreña (Granada) Trial Year:2025
Study Director:Ana Orrico Marín Sponsor Contact:Symbiagro S.r.l Conducted Under GEP:Yes
Investigator:Jorge De La O Sánchez

Trial Map Treatment Description

Trt	Code	Description
1	CHK	Untreated check
2		FORMULATION B 2 g Al/L;FORMULATION B 5 kg Al/ha
3		CEPACET 2 L/ha



Trt	Treatment	Form			Rate	Appl	Appl	Appl	Comment	
No.	Type	Name	Type	Description	Rate	Unit	Code	Description	Timing	1
1	CHK	Untreated check		Irrigation with water			ABC			
2	Biostim	FORMULATION B	SC		2G ai/l	To	Irrigation	ACCRST	10 Days after transplant	
	Biostim	FORMULATION B	SC		5kg ai/ha	BC	Irrigation	ACCRST	2A: BBCH11 and 3A:BBCH53	
3	Biostim	CEPACET	SC		2l/ha	ABC	Irrigation	ACCRST	1A: 10 Days after transplant, 2A: BBCH1	

Sort Order: Replicate 1

Trial Comments

Annex IV. EOR ACCREDITATION

CONSEJERÍA DE AGRICULTURA, PESCA, AGUA Y
DESARROLLO RURAL
Dirección General de la Producción Agrícola y Ganadera

**RESOLUCIÓN DE LA DIRECCION GENERAL DE LA PRODUCCION AGRICOLA Y
GANADERA MEDIANTE LA QUE SE AUTORIZA LA RENOVACIÓN DE
INSCRIPCIÓN EN EL REGISTRO OFICIAL PARA LA REALIZACIÓN DE ENSAYOS
CON PRODUCTOS FITOSANITARIOS**

ANTECEDENTES

PRIMERO.- Examinada la solicitud de renovación para realizar ensayos con productos fitosanitarios presentada por la empresa SISTEMAS DE CONTROL DE PRODUCCIÓN, SL. el 23 de diciembre de 2022, con objeto de comprobar que se mantienen los requisitos establecidos en el Anexo IV y el cumplimiento de las exigencias técnicas dispuestas en el anexo III del Real Decreto 285/2021, de 20 de abril.

SEGUNDO.- La documentación aportada fue debidamente notificada a la Dirección General de la Producción Agrícola y Ganadera de la Consejería de Agricultura, Pesca, Agua y Desarrollo Rural de la Junta de Andalucía, en cumplimiento con el artículo 20 del Real Decreto 285/2021.

Y teniendo en cuenta los siguientes

FUNDAMENTOS DE DERECHO

PRIMERO.- Real Decreto 285/2021, de 20 de abril, por el que se establecen las condiciones de almacenamiento, comercialización, importación o exportación, control oficial y autorización de ensayos con productos fitosanitarios, y se modifica el Real Decreto 1311/2012, de 14 de septiembre, por el que se establece el marco de actuación para conseguir un uso sostenible de los productos fitosanitarios.

El citado Real Decreto establece en su artículo 20, que los titulares autorizados para realizar ensayos con productos con productos fitosanitarios podrán solicitar la renovación de la autorización en el plazo máximo de 3 meses antes de que esta se extinga como consecuencia del transcurso del plazo por la que se otorgó inicialmente.

La solicitud de renovación se dirigirá al órgano competente de la comunidad autónoma que concedió la autorización inicialmente, siguiendo los procedimientos establecidos al efecto por los mismos.

SEGUNDO.- El artículo 48 del Estatuto de Autonomía para Andalucía atribuye la competencia exclusiva en materia de agricultura, ganadería y desarrollo rural, de acuerdo con las bases y la ordenación de la actuación económica general, y en los términos de lo dispuesto en los artículos 38, 131 y 149.1.11.ª, 13.ª, 16.ª, 20.ª y 23.ª de la Constitución Española.



Tabladilla, s/n
Teléfono 95 503 21 67
41071 Sevilla

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FIRMADO POR	MANUEL GOMEZ GALERA	31/01/2023	PÁGINA 1/2
VERIFICACIÓN	Pk2jmP7S8SBP5WSYTZAN2DM8U87K2C	https://ws060.juntadeandalucia.es/verificarFirma	



CONSEJERÍA DE AGRICULTURA, PESCA, AGUA Y
DESARROLLO RURAL
Dirección General de la Producción Agrícola y Ganadera

TERCERO.- El Decreto 157/2022, de 9 de agosto, por el que se establece la estructura orgánica de la Consejería de Agricultura, Pesca, Agua y Desarrollo Rural, contempla en su artículo 11.b) que a la Dirección General de la Producción Agrícola y Ganadera le corresponden, además de las funciones establecidas en el artículo 30 de la Ley 9/2007, de 22 de octubre, la dirección, planificación y coordinación de las funciones de inspección y evaluación fitopatológica así como la dirección, planificación y coordinación de las funciones de inspección y evaluación en materia de higiene de la producción primaria agrícola y utilización de productos fitosanitarios en cumplimiento de las disposiciones sobre sanidad vegetal y seguridad alimentaria en general.

A la vista de todo ello,

RESUELVO

Estimar la solicitud de renovación en el Registro oficial de empresas que realicen ensayos con productos fitosanitarios a la empresa SISTEMAS DE CONTROL DE PRODUCCIÓN, SL. como EOR n.º 50/03, por un periodo de cinco años desde la fecha de notificación de la resolución al al cumplirse los requisitos establecidos por la regulación de aplicación y de conformidad con lo establecido en el Fundamento de Derecho Primero, por un periodo igual al de la autorización oficial.

Notifíquese la presente Resolución a la persona interesada en legal forma, con indicación de que contra la misma, que no pone fin a la vía administrativa, podrá interponer recurso de alzada ante la persona titular de la Consejería de Agricultura, Pesca, Agua y Desarrollo Rural, en el plazo de un mes contado a partir del día siguiente a aquel en que tenga lugar la notificación del presente acto, todo ello de conformidad con lo establecido en los artículos 121 y siguientes de la Ley 39/2015, de 1 de octubre, del Procedimiento Administrativo Común de las Administraciones Públicas, y en el artículo 115.1 de la Ley 9/2007, de 22 de octubre, de la Administración de la Junta de Andalucía.

Sevilla, (ver fecha de firma electrónica)
EL DIRECTOR GENERAL DE LA PRODUCCIÓN
AGRÍCOLA Y GANADERA

Fdo: Manuel Gómez Galera

Tabladilla, s/n
Teléfono 95 503 21 67
41071 Sevilla

FIRMADO POR	MANUEL GOMEZ GALERA	31/01/2023	PÁGINA 2/2
VERIFICACIÓN	Pk2jmP7S8SBP5WSYTZAN2DM8U87K2C	https://ws050.juntadeandalucia.es/verificarFirma	

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