



PROTOCOL

EPPO guidelines N° /157(2) adapted - PP1/135(2) - PP1/152(2) - PP1/181(2)

1. Experimental conditions

1.1. Objective

To evaluate the efficacy of HAPPY PLANTS PRIMEROS AUXILIOS product applied in ornamental plants with nutritional problems.

1.2. Trial conditions

Field trial will be performed on a homogeneous and normal crop of ornamental plants in the selected area.

1.3.- Experimental design and trial carrying out

The product to study will be HAPPY PLANTS PRIMEROS AUXILIOS presented with a syringe of 20 cc. The product will be applied directly to the soil very close to the neck of the plant. Experimental design will content an untreated plot (UTC).

Experimental design will be based on a Randomized Complete Block design with four replications. Elementary plot size will be 5 plants (40 plants for the complete trial).

2.- Treatment's application

2.1.- Thesis and products to study

	PRODUCT	RATES
		FP
1	UTC	-
2	HAPPY PLANTS PRIMEROS AUXILIOS	5 cc/plant

Composition:

Signature:

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2.2.- Application

A slight irrigation (soil humid) will be applied just before the injection of the product. The application of the product will be very close to the neck of the plant, directly to the roots of the plant area. Afterwards, an additional irrigation (soil humid) will be applied.

2.2.1.- Material for the application

We use the syringe that accompanying the presentation of the product. The measure out will be carried out very carefully.

2.2.2.- Timing and application frequency

Three applications, 7 days apart.

2.2.3.- Dose and volume

We will apply exactly 5 cc per plant in each application.

3.- Annotations and assessments

3.1.- Meteorological Data

For each application all the meteorological data of temperature and relative humidity will be annotated. The final report will contain the daily data of maximum, minimum and mean temperatures, relative humidity and the rainfall from the beginning until the end of the trial. In the particular case of the trials carried out in greenhouse conditions, only temperature and relative humidity values were recorded.

3.2.- Edaphological data

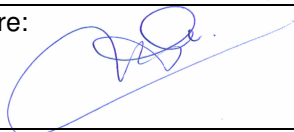
They are not necessary.

3.3.- Assessments

3.3.1.- Methodology

The vigour and the general aspect of each plant will be assessed in each elementary plot according to a scoring scale of 10 points (where 0 means dead plant, 5 means normal appearance of the plant and 10 means optimal appearance of the plant).

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3.3.2. - Time and frequency of the assessments

A general assessment just after each application will be carried out. A further assessment will be carried out 7 days after last application of the product. The schedule will be the following:

- 1st.- T1 + 0
- 2nd.- T2 + 0
- 3rd.- T3 + 0
- 4th.- T3 + 14

3.4.- Observations of other effects on plants

All the effects of phytotoxicities that crop may present will be noted and quantified, and evaluated using the following scoring scale:

<u>Level of phytotoxicity</u>	<u>Description</u>
1	No damages
2	Very slight damages (0%-6.2%)
3	Slight damages (6.3%-12.5%)
5	Moderate damages (12.6%-25%)
7	Severe damages (25.1%-50%)
9	Very severe damages (>50%)

3.5. – Other effects

All the effects of phytotoxicities and the secondary effects that the plants may present as a result of the applications will be noted and described.


4.- Results

Reports of field assessments will be available. The evaluations will be presented following a methodical system. The efficacy results will be calculated according to the ABBOT formula. The data obtained will be submitted to statistical analysis. For each measurement and date, an ANOVA test will be performed to check for treatment differences. Upon a significance level of the treatment term lower than 0.05, the null hypothesis of no difference between the treatment population mean values is to be rejected. The Pair Comparison test will be used to study the significant differences between means when this will be necessary.

5.- Conclusions

The final report will contain the conclusions obtained in the study according to the main goal of the experiment.

Nº OF TRIALS.- 1 (ONE)

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