



**TESTING Levo SL ON THE SPIDER MITE TETRANYCHUS URTICAE IN BEANS**  
**IPM IMPACT TRIAL CODE: TETRUR 13-01A**

Date study report : 06 May 2013

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- Statement of confidentiality

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**Second page:**

Principal investigator's report submission

Name of principal investigator	Date	Signature
Guido Sterk	6th May 2013	

Sponsor's Report approval

Name of Study monitor	Date	Signature

Following pages:

**I Objectives of the trial: testing Levo SL on the spider mite *Tetranychus urticae* in beans.**

## **II Material & Methods**

### **1 Treatment description**

#### **1-1 Treatments list**

<b><i>N</i></b> <b><i>b</i></b>	<b>Product</b>	<b>Active ingredient</b>	<b>Dose</b>	<b>Form.</b>	<b>Amount (cc/g)/L</b>	<b>Nr of appl s</b>	<b>Appl Code</b>	<b>Applic.</b>	<b>Applic.Vol. (cc)</b>
<b>1</b>	<b>Levo SL</b>	<i>Sophora flavescens</i> plant extract 25%	0.10	2,4 SL	1	1	A	Spraying	10 x 5 cc
<b>2</b>	<b>Levo SL</b>	<i>Sophora flavescens</i> plant extract 25%	0.20	2,4 SL	2	1	A	Spraying	10 x 5 cc
<b>3</b>	<b>Levo SL</b>	<i>Sophora flavescens</i> plant extract 25%	0.30	2,4 SL	3	1	A	Spraying	10 x 5 cc
<b>4</b>	<b>Vertimec</b>	abamectine	0.05	018 EC	0.5	1	A	Spraying	10 x 5 cc
<b>5</b>	<b>Control</b>	water				1	A	Spraying	10 x 5 cc

#### **1-2 Application description**

Application A: 16<sup>th</sup> of January 2013

Application technique: spraying

Volume: 10 x 5 cc

Application placement : spray on the whole plant

Spraying equipment: Birchmeier Superstar 1 liter

Spraying technique: spraying till run-off

Spraying pressure: 2 bar



## 2 Trial description

### 2-1 Location

The trial was done at IPM Impact in Neerhespen, Linter, Belgium

### 2-2 Plot description

**Site type:** The trial was done in a small greenhouse compartment at the laboratories of IPM Impact. This kind of test can be considered as a semi-field trial or an extended laboratory trial.

**Surface of the greenhouse compartment:** 75 m<sup>2</sup>

**Number of compartments:** 1

**Plot size:** 1 plant was used for every replicate

**Number of replicates:** 10

**2-3 Trial plan:** randomized blocks

### 2-4 Crop description

**Crop:** Beans

**Variety:** Prelude

Planting date: 22<sup>nd</sup> of December

Number of plants per pot: 1

Potsize: 8 cm diameter, 8 cm high

Substrate: soil, enriched with osmocote

Crop stage at application:

BBCH stage: 15 (2 full leaves, 5 trifoliates)

Height: 25 cm



## 2-5 Target description

**Name:** *Tetranychus urticae* (Tetranychidae)

**Source:** Rearing IPM Impact

**Release :** Infested leaves

**Way of introduction:** Infested leaves

**Quantity:** >+/- 50 adults/plant

**Date:** 09<sup>th</sup> January 2013

## 2-6 Trial condition

20 °C in the glasshouse

Humidity: +/- 60 %

## 3 Time line

### Introduction

The treatments were made on 10 replicates, each of 1 plant, with a sufficient infestation of spider mites (>5 mobile stages/leaf).

### Clear scheme of the time line of the trial with date of application, introduction, assessment

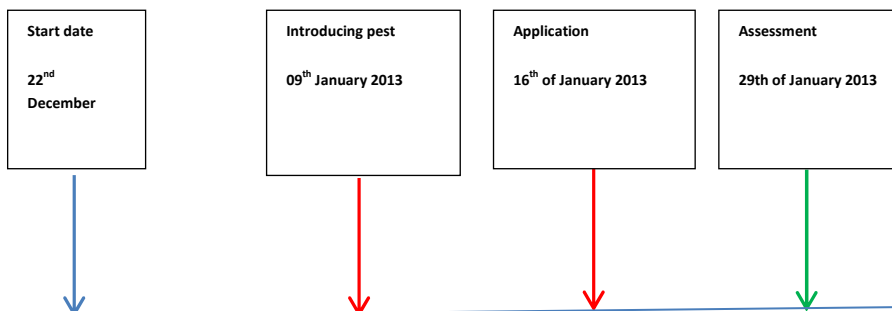
**Date of starting:** 22<sup>nd</sup> of December 2012

**Placing plants in greenhouse:** 22<sup>nd</sup> of December 2012

**Introducing pest (spider mites):** 09<sup>st</sup> of January 2012

**Application date:** 16<sup>th</sup> of January 2013

**Assessment:** 29th of January 2013





## 4 Assessments

### 4-1 Assessments description

**Method:** 1. counting of all mobile stages of spider mites on 2 leaves/plant

**Dates of assessment:** assessment 29th of January 2013

**Stage of the pest:** mixed population *Tetranychus urticae*

### III Results

RESULTS ASSESSMENT NB. 1	29/01/2013
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			Replication Nb.										Total	Abbott	IOBC Class
			1	2	3	4	5	6	7	8	9	10			
<b>1</b>	Levo SL	<b>0,1</b>	13	10	2	2	4	0	9	19	20	0	79	71	<b>3</b>
<b>2</b>	Levo SL	<b>0,2</b>	6	8	2	0	3	3	3	13	0	18	56	79	<b>4</b>
<b>3</b>	Levo SL	<b>0,3</b>	7	2	1	1	0	1	0	2	2	1	17	94	<b>4</b>
<b>4</b>	Vertimec	<b>0,5</b>	1	0	0	0	0	1	0	0	0	0	2	99	<b>4</b>
<b>5</b>	Control	/	18	22	24	49	11	20	17	40	33	39	273		

### IV Conclusion:

1. Levo SL proved to be efficient against the two-spotted spider mite.
2. There's a clear difference in efficacy between the tested dose rates. The lower dose rate of 0.1 % was less effective than the highest dose rate of 0.3 %.