

# FIELD TRIAL REPORT

## REPORT TITLE

**Efficacy and crop selectivity of *Aeuroglyphus ovatus* egg's strategy against *Diabrotica* spp. (DIABVI) on Zea mays. Italy - 2020**

**PROTOCOL ID: 4150.I\_4152.I.SAG19**

**SAGEA TRIAL CODE: 4201.I.SAG20**

**Date of Issue: 18.Nov.2020**

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*Sponsor:* **Bioline AgroSciences**  
1306 Route de Biot,  
06560 Valbonne,  
FRANCE

*Responsible for the Sponsor:* Thibault Andrieux

*Sponsor:* **Bioline AgroSciences**  
1306 Route de Biot,  
06560 Valbonne,  
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*Testing Facility:* **SAGEA Centro di Saggio s.r.l.**  
Via San Sudario, 15  
12050 Castagnito d'Alba (CN)  
ITALY

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## **1GEP COMPLIANCE STATEMENT**

The test facility, SAGEA Centro di Saggio s.r.l., has been officially recognized as an organization for efficacy evaluation of plant protection products in Italy. See appendix 4.

The trial was performed according to Good Experimental Practice (GEP). All assessments and applications were done in accordance with the study protocol agreed with the Sponsor.

The trial is to be considered valid for the registration proposal.

Guidelines: EPPO Standards PP 1/152(4), 1/135(4), 1/181(4), 1/212(2).

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**Study director:** Stefano Gaudino

**Date:** 23.Nov.2020

**Signature:**



## **2ARCHIVING STATEMENT**

The protocol, raw data and a copy of the final report will be lodged during three years in the archive of SAGEA Centro di Saggio s.r.l., Via San Sudario, 15 – 12050 – Castagnito d'Alba (CN) – Italy.

### 3SUMMARY

The trial was set up in a farm sited in Castagnole Piemonte (TO), in Piedmont Region (North-western Italy), area where *Diabrotica virgifera virgifera* damages on maize are usually recorded.

The aim of the study was to evaluate the efficacy against *Diabrotica virgifera virgifera* and the selectivity on maize of the Mites against Diabrotica: innovative method of biological control.

On this treatment T1, the marbles supplied by Bioline were applied in the seed furrow during sowing using the micro-granulator on the whole micro-parcel (4 rows of maize x 10 metres) at the rate of 8kg/ha. The mites were spreading on the microplots by hand through the "saltshakers" supplied by Bioline.

The treatment T1 was compared with a negative control, 4 micro-parcels without marbles spreading and without the addition of mites (T2) and a positive control with reference phytosanitary products, Force Ultra (T3).

The crop was sowed using a pneumatic plot drilling machine on April the 17<sup>th</sup>. In this site, the agronomic practices are limited at the essential activities: sowing, fertilization and weed control and there aren't specific activities of ridging as in other areas of northern Italy. The crop was irrigated during the growing season.

During the trial occurred a high attack of *Diabrotica virgifera virgifera*.

The untreated control showed significant lower results in terms of yield compared with the other two treatments.

The treatments with Force Ultra and with the marbles plus predatory mites, achieved significant better results compared with the negative control in term of root damage and insect pressure (n° of adults per emergence cages).

No phytotoxic symptoms were observed in the trial area showing the full selectivity of test products on maize (DKC5830 variety).

## 4 MATERIAL & METHODS / TRIAL INFORMATION

### 4.1 Trial Treatments

Trt No.	Type	Treatment Name	Form Type	Description	Rate	Rate Unit
1	PROD	Marbles microgranulators+mites	GR		8	Kg/ha
2	CHK	Untreated Check		not treated		
3	INSE	Force Ultra	GR		12,2	kg/ha

#### Additional Treatment Information

##### Type:

CHK = Check or Untreated

INSE = Insecticide or Nematicide

##### Product

UNTREATED CHECK, NA = UNTREATED CHECK|0|UNTREATED CHECK

Force Ultra, GR = TEFLUTHRIN|1.5%|TEFLUTHRIN

##### Fm Tp

GR = GRANULAR

##### Appl Meth

IFAP = IN-FURROW APPL.|IN-FURROW APPLICATION

##### Form Unit

Kg/ha = Kilograms dry product per Hectare (US=kg/A)

##### Other Rate Unit

g A/ha = grams Active Ingredient per Hectare

Replications: 4, Untreated treatments: 2, Conduct under GLP/GEP: Yes (GEP with no protection), Design: Randomized Complete Block (RCB), Treatment units: Treated 'Plot' experimental unit size, Dry Form. Unit: %, Treated 'Plot' experimental unit size Width: 3 meters, Treated 'Plot' experimental unit size Length: 10 meters, Format definitions: G-All7.def, G-All7.frm

## 4.2 Site description

### General Trial Information

<b>Study Director:</b>	Stefano Gaudino	
<b>Investigator:</b>	Natale Sanino	
<b>Discipline:</b>	I insecticide	<b>Data Location:</b> ARM ARM Assessment Data
<b>Trial Status:</b>	F one-year/final	<b>Trial Reliability:</b> GOOD
<b>Initiation Date:</b>	Apr-17-2020	<b>Planned Completion Date:</b> Nov-15-2020
<b>Completion Date:</b>	Oct-02-2020	<b>Trial Usage/Type:</b> DEM Demonstration
<b>GEP Accreditation Number:</b>	0021225	

### Trial Location

<b>City:</b>	Castagnole Piemonte (TO)	<b>Country:</b>	ITA ITALY
<b>State/Prov.:</b>	Torino (TO)	<b>Region:</b>	Piedmont
<b>Postal Code:</b>	10060	<b>Climate zone:</b>	EPPO Mediterranean
<b>Latitude of LL Corner °:</b>	44,90603611 N		
<b>Longitude of LL Corner °:</b>	7,57085277 E		
<b>Altitude of LL Corner, Unit:</b>	244,00 m	<b>GPS target:</b>	G GPS for trial site

**Conducted Under GEP:** Yes **Official trial ID:** 4201.I.SAG20

Guideline	Description
PP 1/135(4)	Phytotoxicity assessment
PP 1/152(4)	Design and analysis of efficacy evaluation trials
PP 1/181(4)	Conduct and reporting of efficacy evaluation trials including good experimental practice
PP 1/212(2)	Diabrotica virgifera – larvae

### Objectives:

Efficacy and crop selectivity of different strategy againsts Diabrotica spp (DIABVI) on Zea mays. Italy, 2020.

### Contacts

<b>Study Director:</b>	Stefano Gaudino	<b>Title:</b>	DATMGR
<b>Organization:</b>	SAGEA Centro di Saggio Srl	<b>Phone No.:</b>	+39 0173 212614
<b>Address:</b>	Via San Sudario, 15	<b>Mobile No.:</b>	+39 3357048810
<b>City+State/Prov:</b>	Castagnito d'Alba (CN)	<b>E-mail:</b>	stefano.gaudino@sagea.com
<b>Postal Code:</b>	12050		
<b>Country:</b>	ITA Italy		
<b>Investigator:</b>	Natale Sanino	<b>Title:</b>	Field trialist
<b>Organization:</b>	SAGEA Centro di Saggio Srl	<b>Phone No.:</b>	+39 0173 212614
<b>Address:</b>	Via San Sudario, 15	<b>E-mail:</b>	natale.sanino@sagea.com
<b>City+State/Prov:</b>	Castagnito d'Alba (CN)		
<b>Postal Code:</b>	12050		
<b>Country:</b>	ITA Italy		
<b>Sponsor:</b>	Thibault Andrieux	<b>Title:</b>	Sponsor
<b>Organization:</b>	Bioline AgroSciences		
<b>Address:</b>	1306 Route de Biot		
<b>City+State/Prov:</b>	Valbonne		
<b>Postal Code:</b>	06560	<b>E-mail:</b>	tandrieux@biolineagrosciences.ft
<b>Country:</b>	FRA France		

### Cooperator/Landowner

<b>Cooperator:</b>	Natale Sanino	<b>Role:</b>	FALDOW
<b>Organization:</b>	Azienda Agricola Sanino		
<b>Address 1:</b>	cascina Nuova dell'Angelo, 58		
<b>City:</b>	Castagnole Piemonte		
<b>State/Prov:</b>	Torino		
<b>Postal Code:</b>	10060		
<b>Country:</b>	ITA Italy		

### Crop Description

<b>Crop 1:</b>	ZEAMX Zea mays Corn	<b>BBCH Scale:</b>	BCOR
<b>Variety:</b>	DKC 5830		
<b>Planting Date:</b>	Apr-17-2020	<b>Depth, Unit:</b>	4 cm
<b>Planting Method:</b>	SEEDDED seeded	<b>Emergence Date:</b>	May-17-2019
<b>Planting Equipment:</b>	SR Drilling Machine	<b>Spacing Within Row, Unit:</b>	18 cm
<b>Row Spacing, Unit:</b>	75 cm		
<b>Soil Temperature, Unit:</b>	19 C	<b>Seed Bed:</b>	FINE fine
<b>Soil Moisture:</b>	DRY dry		

### Pest Description

<b>Pest 1 Type:</b>	I	<b>Code:</b>	DIABVI Diabrotica virgifera virgifera
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**Site and Design**

**Treated Plot Width:** 3 m  
**Treated Plot Length:** 10 m  
**Treated Plot Area:** 30 m<sup>2</sup>  
**Tillage Type:** CONTIL conventional-till  
**Study Design:** RACOB L Randomized Complete Block (RCB)  
**% Slope:** 0,1  
**Site Type:** FIELD field  
**Experimental Unit:** 1 PLOT plot  
**Treatments:** 3  
**Replications:** 4  
**Untreated Arrangeent:** INCLUDED single control randomized in each block

No.	Previous Crop	Year
1.	ZEAMX	2019

**Soil Description****Soil analysis on the experimental field**

**Texture:** L - Loam  
**% Sand:** 61,5  
**% OM:** 1,94  
**% Silt:** 26,5  
**pH:** 5,95  
**% Clay:** 12,0  
**CEC:** 7,7

**Analyzed By:**

Enocontrol Scarl  
C.so Enotria 2/C – 12051 Alba (CN)  
Italy



### SIGNIFICANT RAINFALL/IRRIGATION EVENTS

**Overall moisture Station:** WEWEDR wet wet dry  
**DClosest Weather station:** Lombriasco (TO)

**Distance, Unit:** 6 km

S	Z	K	Date	Temperature °C			Relative Humidity %			mm/m <sup>2</sup> Rainfall
				TMx	TA <sub>v</sub>	TM <sub>n</sub>	RH Mx	RH A <sub>v</sub>	RH M <sub>n</sub>	
14	4	2020	01/04/2020	9,9	5,7	1,9	89	68	44	0
14	4	2020	02/04/2020	13,8	6,8	0,1	92	68	41	0
14	4	2020	03/04/2020	18,4	8,9	-0,4	92	66	34	0
14	4	2020	04/04/2020	20,3	10,7	1,5	91	62	30	0
15	4	2020	05/04/2020	19,9	11	2,5	91	61	31	0
15	4	2020	06/04/2020	21,4	12,1	3,3	89	57	25	0
15	4	2020	07/04/2020	24,1	13,6	3,4	90	53	20	0
15	4	2020	08/04/2020	23,8	13,9	3,5	87	49	20	0
15	4	2020	09/04/2020	24,2	13,9	4,1	86	52	21	0
15	4	2020	10/04/2020	25,9	15,3	4,5	89	48	15	0
15	4	2020	11/04/2020	26,6	15,6	4	86	47	12	0
16	4	2020	12/04/2020	24,7	14,8	4,7	88	52	22	0
16	4	2020	13/04/2020	22,5	14,8	7,6	82	53	28	0
16	4	2020	14/04/2020	25,4	15,9	6,9	88	53	23	0
16	4	2020	15/04/2020	18,6	12,6	7,7	82	51	34	0
16	4	2020	16/04/2020	22	12,7	3,9	90	60	25	0
16	4	2020	17/04/2020	22,3	13,7	4,8	88	60	28	0
16	4	2020	18/04/2020	24,6	15,5	7,7	89	67	35	0
17	4	2020	19/04/2020	19	13,7	9,1	90	84	64	1
17	4	2020	20/04/2020	13,4	12,3	10,3	92	90	89	81,2
17	4	2020	21/04/2020	12	10,1	8,9	93	86	62	34,8
17	4	2020	22/04/2020	19,6	13,7	9,1	87	63	40	0
17	4	2020	23/04/2020	22,5	14,4	5,9	92	67	39	0
17	4	2020	24/04/2020	24,3	16	7,7	91	69	40	0
17	4	2020	25/04/2020	25,4	16,8	11,1	89	73	51	0
18	4	2020	26/04/2020	20,5	15,2	10,6	91	82	63	1,8
18	4	2020	27/04/2020	22,2	15,6	12,1	91	81	57	11,8
18	4	2020	28/04/2020	16,3	13,6	10,8	92	90	84	39
18	4	2020	29/04/2020	23,1	15,7	9,7	91	73	39	0
18	4	2020	30/04/2020	19,7	14,6	10,2	91	81	62	1,4
18	5	2020	01/05/2020	21,5	14,7	10,2	91	79	52	1,6
18	5	2020	02/05/2020	26,9	18,3	11	92	63	33	0
19	5	2020	03/05/2020	25,1	17,9	10,7	86	62	37	0
19	5	2020	04/05/2020	24	17,5	12,8	83	59	39	0
19	5	2020	05/05/2020	24,3	17,2	10,5	91	73	53	0
19	5	2020	06/05/2020	26	18,3	11,2	91	72	48	0
19	5	2020	07/05/2020	25,5	19,2	15,1	80	59	41	0
19	5	2020	08/05/2020	26,8	19	12,9	90	63	40	0
19	5	2020	09/05/2020	25,9	18,6	13	88	60	39	3,6

20	5	2020	10/05/2020	22,1	15,6	12,4	91	81	55	25,6
20	5	2020	11/05/2020	19,2	14,7	11,3	92	82	66	28,8
20	5	2020	12/05/2020	23	17	12,4	91	78	55	0
20	5	2020	13/05/2020	15,2	13,6	12,4	92	91	90	15,8
20	5	2020	14/05/2020	23,1	16,3	11,2	91	78	54	3,2
20	5	2020	15/05/2020	23,2	17	12	92	79	56	14,6
20	5	2020	16/05/2020	21,3	16,6	14,5	92	87	68	30,4
21	5	2020	17/05/2020	23,6	17	13,9	93	82	55	16,4
21	5	2020	18/05/2020	26,8	19,6	11,8	92	74	52	0,4
21	5	2020	19/05/2020	24,3	18,8	15,4	91	80	58	0,8
21	5	2020	20/05/2020	29,5	20,4	11,9	92	67	35	0
21	5	2020	21/05/2020	27,8	21,4	15,9	88	70	48	0
21	5	2020	22/05/2020	28,5	21,4	14,6	91	74	49	0,4
21	5	2020	23/05/2020	27,6	20,7	15,7	90	80	59	1,6
22	5	2020	24/05/2020	26,2	19,4	12,5	90	65	33	0
22	5	2020	25/05/2020	27,5	19,7	11,7	90	64	39	0
22	5	2020	26/05/2020	27,4	20,2	13	90	63	35	0
22	5	2020	27/05/2020	25,6	19,7	15,3	80	58	40	0
22	5	2020	28/05/2020	28,2	19,8	12	90	66	40	0
22	5	2020	29/05/2020	20,7	16,4	12,8	86	71	51	0
22	5	2020	30/05/2020	25,7	18	10,4	91	64	35	0
23	5	2020	31/05/2020	24,7	18,2	14	89	70	43	0,4
23	6	2020	01/06/2020	27,5	19,9	12,4	91	68	41	0
23	6	2020	02/06/2020	30,1	21,7	12,6	90	64	31	0
23	6	2020	03/06/2020	28,2	19	13,6	91	75	48	0,4
23	6	2020	04/06/2020	20,2	16,3	14,5	94	89	79	5
23	6	2020	05/06/2020	28,2	20,1	13,8	92	67	36	0
23	6	2020	06/06/2020	26,8	19,4	11,8	91	73	50	0
24	6	2020	07/06/2020	26	18,5	15,1	91	80	55	3,4
24	6	2020	08/06/2020	22,1	16,4	12,9	92	85	65	10,2
24	6	2020	09/06/2020	21,1	14,8	10,8	93	84	55	17,6
24	6	2020	10/06/2020	23,6	16,2	9,4	93	76	45	0,2
24	6	2020	11/06/2020	20,5	15,6	13,6	93	88	72	15,8
24	6	2020	12/06/2020	20,5	16	13,4	93	87	73	5,2
24	6	2020	13/06/2020	22	16,2	13,4	93	87	61	18,6
25	6	2020	14/06/2020	29,4	20,2	12,4	94	69	36	0
25	6	2020	15/06/2020	29,7	21,9	14,3	92	66	35	0,2
25	6	2020	16/06/2020	27,5	19,5	15,1	92	78	48	4,2
25	6	2020	17/06/2020	25,6	18,1	13	93	80	54	1
25	6	2020	18/06/2020	26,2	18,5	11,8	93	76	53	3,6
25	6	2020	19/06/2020	27,4	19,9	12,1	93	72	45	0
25	6	2020	20/06/2020	28,7	21,3	14,6	92	68	41	0
26	6	2020	21/06/2020	30,6	22,6	14,1	92	62	32	0
26	6	2020	22/06/2020	31,7	23,3	13,6	91	62	31	0
26	6	2020	23/06/2020	32,9	24,4	16,5	91	63	33	0
26	6	2020	24/06/2020	32,2	24,7	16	91	66	44	0

26	6	2020	25/06/2020	29,7	23,8	18,9	90	71	51	0
26	6	2020	26/06/2020	28,6	22,7	18,4	90	73	55	0
26	6	2020	27/06/2020	29,6	21,7	16,3	90	74	45	2,4
27	6	2020	28/06/2020	31,5	23,5	15,9	91	70	47	0
27	6	2020	29/06/2020	33,3	25,1	17,5	91	72	42	0
27	6	2020	30/06/2020	32,1	24,5	18,3	91	74	50	0
27	7	2020	01/07/2020	30,6	24	18,9	90	76	55	8,6
27	7	2020	02/07/2020	31,5	23,4	17,5	91	74	49	0,6
27	7	2020	03/07/2020	30,5	20,1	15	92	79	46	18,6
27	7	2020	04/07/2020	29,3	21,6	14,2	92	72	48	0
28	7	2020	05/07/2020	31,7	24	15,6	92	72	44	0
28	7	2020	06/07/2020	33,1	25,5	18,3	91	69	40	0
28	7	2020	07/07/2020	28,2	22,8	16,8	85	60	37	0
28	7	2020	08/07/2020	29	23,2	17,9	89	63	36	0
28	7	2020	09/07/2020	31	23,6	15,7	91	69	42	0
28	7	2020	10/07/2020	31,8	24,1	17,9	91	74	43	3
28	7	2020	11/07/2020	31,3	24,4	19,1	91	76	52	0,2
29	7	2020	12/07/2020	29,4	23,1	18,3	91	69	42	0
29	7	2020	13/07/2020	26	21,9	18,6	84	66	48	7,4
29	7	2020	14/07/2020	27,7	21,6	18,2	90	68	40	0,4
29	7	2020	15/07/2020	28,7	21,3	16,2	91	72	47	0
29	7	2020	16/07/2020	30,4	22,7	15	92	69	40	0
29	7	2020	17/07/2020	31	23,8	16,2	91	69	45	4,2
29	7	2020	18/07/2020	28,2	22	18,2	91	72	45	3,8
30	7	2020	19/07/2020	31,2	23	15	92	69	40	0
30	7	2020	20/07/2020	32,7	24,7	17,6	91	69	41	0
30	7	2020	21/07/2020	33	24,9	18,2	91	73	46	1,2
30	7	2020	22/07/2020	33,3	24,9	18,7	91	76	51	1,4
30	7	2020	23/07/2020	32,3	24,2	16,7	92	70	38	0
30	7	2020	24/07/2020	25,6	21,5	15,7	91	78	57	0,4
30	7	2020	25/07/2020	32,2	22,8	13,6	93	66	32	0
31	7	2020	26/07/2020	31,9	24	17	90	67	39	0
31	7	2020	27/07/2020	32,2	24,7	18,1	92	73	45	0
31	7	2020	28/07/2020	33,2	25,1	18,4	92	75	51	0,4
31	7	2020	29/07/2020	34,2	26,6	20,5	90	74	50	0
31	7	2020	30/07/2020	35,2	27,7	21,2	91	73	48	0
31	7	2020	31/07/2020	35,6	27,9	21	91	71	37	0
31	8	2020	01/08/2020	35,9	26,9	19,5	88	64	41	4,8
32	8	2020	02/08/2020	34,3	24,9	18,5	91	73	38	0,6
32	8	2020	03/08/2020	24,7	20,2	17,1	93	88	71	3,2
32	8	2020	04/08/2020	29,6	21,8	14,8	93	65	33	0
32	8	2020	05/08/2020	30,3	21,6	13,5	93	64	28	0
32	8	2020	06/08/2020	31	22,3	14,1	93	68	34	0,2
32	8	2020	07/08/2020	33,4	24,3	15,6	92	68	38	0
32	8	2020	08/08/2020	33,5	25,7	17,8	91	67	39	0
33	8	2020	09/08/2020	34,6	26,3	18,8	92	68	39	0

33	8	2020	10/08/2020	32,8	23,7	18,4	92	76	47	0,8
33	8	2020	11/08/2020	33,9	24,6	16,7	92	71	40	0
33	8	2020	12/08/2020	33,9	23,8	18,5	92	77	44	18
33	8	2020	13/08/2020	30,7	23,7	18,3	92	76	57	1,6
33	8	2020	14/08/2020	31,6	24,5	17,5	92	73	50	0,2
33	8	2020	15/08/2020	32,2	24,8	19,1	92	74	53	2
34	8	2020	16/08/2020	30,2	22	17,5	93	81	52	26,2
34	8	2020	17/08/2020	28,8	21,5	16,3	93	79	58	0,8
34	8	2020	18/08/2020	31,4	23,6	17,7	93	73	41	0,4
34	8	2020	19/08/2020	31,2	23,4	16,5	93	73	45	0
34	8	2020	20/08/2020	32,7	25	18,3	92	72	44	0
34	8	2020	21/08/2020	33,8	26,4	20,1	92	72	48	0
34	8	2020	22/08/2020	34,1	26,5	20,2	92	69	42	0
35	8	2020	23/08/2020	32,2	25,8	21,2	92	71	44	0
35	8	2020	24/08/2020	28,7	22,5	17,6	92	75	52	1
35	8	2020	25/08/2020	30	22,8	17,4	92	73	49	0
35	8	2020	26/08/2020	32,2	23,6	16,2	93	74	46	0
35	8	2020	27/08/2020	32,1	23,9	16,5	93	73	44	0
35	8	2020	28/08/2020	31,2	21,8	18,2	93	83	49	27
35	8	2020	29/08/2020	25	20	17,6	93	86	72	1
36	8	2020	30/08/2020	27,9	20,5	13,9	93	72	37	4,2
36	8	2020	31/08/2020	24,7	18,5	14	93	74	45	0,8
36	9	2020	01/09/2020	27,3	18,7	10,9	94	72	39	0
36	9	2020	02/09/2020	24,9	18,6	15,2	93	80	53	16,6
36	9	2020	03/09/2020	27,4	20,2	14,7	93	74	46	0
36	9	2020	04/09/2020	29,1	20,6	13,1	93	74	44	0
36	9	2020	05/09/2020	30,1	21,6	14,6	93	73	44	0,2
37	9	2020	06/09/2020	28,6	21,1	15,2	93	76	52	0
37	9	2020	07/09/2020	23,4	18,7	14,8	93	83	64	22,4
37	9	2020	08/09/2020	27,8	19,8	12,7	94	74	51	0,2
37	9	2020	09/09/2020	28,4	19,9	13,5	93	78	51	0
37	9	2020	10/09/2020	28,3	21	13,9	93	76	53	0
37	9	2020	11/09/2020	22,8	19,2	16,6	93	90	79	10,4
37	9	2020	12/09/2020	29,9	21,3	13,8	93	74	47	0,2
38	9	2020	13/09/2020	31,2	22,7	15,5	93	74	47	0
38	9	2020	14/09/2020	30,7	22,8	16,1	93	74	45	0
38	9	2020	15/09/2020	31,3	22,6	16,4	93	71	41	0
38	9	2020	16/09/2020	31,6	21,9	15,6	92	72	38	0
38	9	2020	17/09/2020	31,6	21,9	14,8	93	69	33	0
38	9	2020	18/09/2020	30	21,6	14,3	92	69	41	0
38	9	2020	19/09/2020	25,6	20,8	18,5	90	77	54	1,4
39	9	2020	20/09/2020	26,1	19,3	16,8	92	82	53	10,4
39	9	2020	21/09/2020	23,1	18	16,1	93	88	70	1,8
39	9	2020	22/09/2020	21,4	17,1	15,4	93	90	77	53,2
39	9	2020	23/09/2020	24,6	18,2	14,2	93	81	55	0
39	9	2020	24/09/2020	24,4	17,6	13,1	93	85	64	1,6

39	9	2020	25/09/2020	22,2	15,9	11,1	93	66	26	0,6
39	9	2020	26/09/2020	21,1	13,5	5,7	85	42	17	0
40	9	2020	27/09/2020	19,9	10,8	1,9	93	63	28	0
40	9	2020	28/09/2020	23,1	13,1	4,5	94	66	29	0,2
40	9	2020	29/09/2020	22,8	13,9	6,1	93	72	38	0
40	9	2020	30/09/2020	23,6	14,8	8	93	78	52	0
40	10	2020	01/10/2020	22,8	16,6	11,7	93	79	56	0
40	10	2020	02/10/2020	14,7	14,2	13,5	93	91	89	68,2

Legenda	
<b>S</b>	Week
<b>M</b>	Month
<b>TMx</b>	Maximum daily Temperature °C
<b>TA<sub>v</sub></b>	Average daily Temperature °C
<b>TM<sub>n</sub></b>	Minimum daily Temperature °C
<b>RH M<sub>x</sub></b>	Maximum daily Relative Humidity %
<b>RH A<sub>v</sub></b>	Average daily Relative Humidity %
<b>RH M<sub>n</sub></b>	Minimum daily Relative Humidity %
<b>Rainfall</b>	Daily Rainfall mm/m <sup>2</sup>

### 4.3 Application description

<b>Application Description</b>
--------------------------------

	<b>A</b>
<b>Application Date</b>	Apr-17-2020
<b>Appl. Start Time</b>	13:00
<b>Appl. Stop Time</b>	14:30
<b>Application Method</b>	SEETRE
<b>Application Timing</b>	ATPLAN
<b>Application Placement</b>	INFURR
<b>Applied By</b>	CF,PO,CM
<b>Air Temperature Start, Stop</b>	20 20 C
<b>% Relative Humidity Start, Stop</b>	31 31
<b>Soil Temperature</b>	19 C
<b>Soil Moisture</b>	GOOD
<b>% Cloud Cover</b>	10
<b>Next Moisture Occurred On</b>	Apr-19-2020
<b>Time to Next Moisture</b>	2 DAY
<b>Moisture 6 Hours after Appl.</b>	0 mm
<b>Moisture 1 Week after Appl.</b>	117 mm
<b>Weather Source</b>	WSLOCAL

**Protocol Application Directions:**

Number of applications = 1 [A]

In furrow application during the sowing, for FORCE Ultra at 12,2 kg/ha and the marbles at rate of 8 kg/ha.

The predatory mites were homogeneously applied by hand with the specific packaged "saltshakers" provide by Bioline. The dosage rate was 100 mites each microplot over an area of 1 m<sup>2</sup>; four microplot were set-up each plot.

The granular products were applied using a microgranulator fixed on the seeding machine and distributing the granules in the furrow, ensure a homogeneous distribution of the product.

Treatments should be arranged in a suitable statistical design, for example, a randomized block design.

Plot size: 30 m2 and 4 rows wide.

<b>Crop Stage at each Application</b>
---------------------------------------

	<b>A</b>
<b>Crop 1 Code, BBCH Scale:</b>	ZEAMX BCOR
<b>Stage Scale Used:</b>	BBCH
<b>Stage Majority, Percent:</b>	00 100
<b>Stage Minimum, Percent:</b>	00 100
<b>Stage Maximum, Percent:</b>	00 100

### Pest Stage at each Application

	<b>A</b>
<b>Pest 1 Code, Type, Scale:</b>	DIABVI I
<b>Stage Majority, Percent:</b>	EGG 100
<b>Stage Minimum, Percent:</b>	EGG 100
<b>Stage Maximum, Percent:</b>	EGG 100

### Application Equipment

	<b>A</b>
<b>Equipment Type:</b>	SEEBOX

## 4.4 Statistical analysis

Data from the assessments were analysed by variance analysis (ANOVA) with software ARM 2020.2 from Gylling Data Management. If significant effect of the treatment was obtained (on the basis of the ANOVA analysis) differences between means were checked with Student-Newman-Keuls (p: 0.05).

In the case of data showing "treatment variances not homogeneous" (Bartlett's test for homogeneity), prior to the analysis the data were transformed with  $\log(x+1)$  (number) or  $\arcsin\sqrt{x+1}$  (percentage). Results obtained were indicated by a letter – treatment means with no letters in common are significantly different in accordance with a Student-Newman-Keuls's test conducted at a 95% confidence level.

Where data have been transformed, letters were included in the transformed data. The means reported are the original ones and the transformed ones.



## 5 RESULTS AND DISCUSSION

### 5.1 Results Tables

Table 1. Assessment carried out on May the 11<sup>th</sup> as number of emerged plants pe square meter.

Pest Type	I Insect
Pest Code	DIABVI
Pest Scientific Name	Diabrotica virgifera v>
Crop Type, Code	C ZEAMX
BBCH Scale	BCOR
Crop Scientific Name	Zea mays
Crop Variety	DKC5830
Rating Date	May-11-2020
Part Rated	PLANT C
Rating Type	COU/m2
Rating Unit	NUMBER
Sample Size	1 m2
Collection Basis	1 PLOT
Reporting Basis	1 m2
Crop Stage Scale	BBCH
Crop Stage Majority/Min/Max	13 12 14
Rating Timing	A1
Days After First/Last Applic.	24 24
Trt-Eval Interval	24 DA-A
Plant-Eval Interval	24 DP-1
Trt Treatment	Rate
No. Name	Rate Unit
1Marbles microgranulators+mites	8kg/ha
2Untreated Check	
3Force Ultra	12,2kg/ha
LSD P=.05	0,97
Standard Deviation	0,56
CV	9,1
Grand Mean	6,16
Bartlett's X2	4,423
P(Bartlett's X2)	0,11
Skewness	0,9146
Kurtosis	0,3811
Replicate F	4,437
Replicate Prob(F)	0,0574
Treatment F	0,059
Treatment Prob(F)	0,9436



Rating Type

COU/m2 = count per square meter

Rating Unit

NUMBER = number

m2 = square meter

PLOT = total plot

m2 = square meter

Crop Stage Scale

BBCH = BBCH uniform plant stages

Crop Stage Majority/Min/Max

13 = 3 leaves unfolded (V3 = Third Leaf)

12 = 2 leaves unfolded (V2= Second Leaf)

14 = 4 leaves unfolded (V4 = Fourth Leaf)

Rating Timing

A1 = 1st Assessment According to Trial Schedule

Plant-Eval Interval

24 DP-1 = 1 ZEAMX Apr-17-2020

Means followed by same letter or symbol do not significantly differ ( $P=.05$ , Student-Newman-Keuls).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 2. Assessments on crop N-tester conducted with the SPAD and the Greenseeker, on June the 12<sup>nd</sup> and on July 16<sup>th</sup>

Pest Type	I Insect	I Insect	I Insect	I Insect
Pest Code	DIABVI	DIABVI	DIABVI	DIABVI
Pest Scientific Name	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Variety	DKC5830	DKC5830	DKC5830	DKC5830
Rating Date	Jun-12-2020	Jun-12-2020	Jul-16-2020	Jul-16-2020
Part Rated	LEAF C	LEAF C	LEAF C	LEAF C
Rating Type	NUTCON	NDVI	NUTCON	NDVI
Rating Unit	SPAD	0-100	SPAD	0-100
Sample Size	1 LEAF	1 PLOT	1 LEAF	1 PLOT
Collection Basis	30 LEAF	1 PLOT	30 LEAF	1 PLOT
Reporting Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	34 32 35	34 32 35	55 53 59	55 53 59
Rating Timing	A2	A2	A5	A5
Days After First/Last Applic.	56 56	56 56	90 90	90 90
Trt-Eval Interval	56 DA-A	56 DA-A	90 DA-A	90 DA-A
Plant-Eval Interval	56 DP-1	56 DP-1	90 DP-1	90 DP-1
Trt Treatment				
No.Name	3	4	10	11
1 Marbles				
1 microgranulators+mites	8kg/ha			
2 Untreated Check				
3 Force Ultra	12,2kg/ha			
LSD P=.05	1,63	15,747	10,17310	3,866
Standard Deviation	0,94	9,101	5,87963	2,235
CV	2,44	15,66	11,84	3,02
Grand Mean	38,67	58,125	49,64542	73,875
Bartlett's X2	0,785	0,335	3,039	7,665
P(Bartlett's X2)	0,675	0,846	0,219	0,022*
Skewness	0,1637	0,101	-1,5797*	-1,8891*
Kurtosis	-1,3173	-0,6667	3,3257*	3,9284*
Replicate F	0,250	0,815	0,189	0,983
Replicate Prob(F)	0,8587	0,5307	0,9000	0,4610
Treatment F	22,875	3,091	0,155	3,092
Treatment Prob(F)	0,0016	0,1195	0,8597	0,1194

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).  
t=Mean descriptions are reported in transformed data units, and are not de-transformed.  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Type

I, Insect = Insect

Pest Code

DIABVI, Diabrotica virgifera virgifera, Western corn rootworm = US

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

LEAF = leaf

C = Crop is Part Rated

Rating Type

NUTCON = nutrient content

NDVI = normalized difference vegetation index

Rating Unit

SPAD = spad

0-100 = 0-100 index/scale-percent

LEAF = leaf

PLOT = total plot

Crop Stage Scale

BBCH = BBCH uniform plant stages

Crop Stage Majority/Min/Max

34 = 4 nodes detectable

55 = Middle of tassel emergence: middle of tassel begins to separate

32 = 2 nodes detectable

53 = Tip of tassel visible

35 = 5 nodes detectable

59 = End of tassel emergence: tassel fully emerged and separated

Rating Timing

A2 = 2nd Assessment According to trial Schedule

A5 = 5th Assessment According to Trial Schedule

Plant-Eval Interval

56 DP-1 = 1 ZEAMX Apr-17-2020

90 DP-1 = 1 ZEAMX Apr-17-2020

Table 3. Assessment carried out on July the 16<sup>th</sup> to evaluate the *Diabrotica virgifera virgifera* root damages (according IOWA scale 0-3 and 1-6).

Pest Type	I Insect	I Insect
Pest Code	DIABVI	DIABVI
Pest Scientific Name	Diabrotica virgifera v	Diabrotica virgifera v
Crop Type, Code	C ZEAMX	C ZEAMX
BBCH Scale	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays
Crop Variety	DKC5830	DKC5830
Rating Date	Jul-16-2020	Jul-16-2020
Part Rated	ROOT C	ROOT C
Rating Type	DAMINS	DAMINS
Rating Unit	0-3NCR	1-6ICR
Sample Size	1 PLOT	1 PLOT
Collection Basis	10 ROOT	10 ROOT
Reporting Basis	1 PLOT	1 PLOT
Crop Stage Scale	BBCH	BBCH
Crop Stage Majority/Min/Max	55 53 59	55 53 59
Rating Timing	A5	A5
Days After First/Last Applic.	90 90	90 90
Trt-Eval Interval	90 DA-A	90 DA-A
Plant-Eval Interval	90 DP-1	90 DP-1
ARM Action Codes		
Trt Treatment		
No. Name Rate Unit	14	15
1Marbles microgranulators+mites 8kg/ha	0,28b	1,73b
2Untreated Check	2,45a	5,05a
3Force Ultra 12,2kg/ha	0,73b	2,48b
LSD P=.05	0,768	1,199
Standard Deviation	0,444	0,693
CV	38,59	22,48
Grand Mean	1,150	3,083
Bartlett's X2	3,258	4,422
P(Bartlett's X2)	0,196	0,11
Skewness	0,8774	0,9355
Kurtosis	-0,6498	-0,4581
Replicate F	0,615	0,669
Replicate Prob(F)	0,6300	0,6015
Treatment F	26,772	25,331
Treatment Prob(F)	0,0010	0,0012

Pest Type

I, Insect = Insect

Pest Code

DIABVI, Diabrotica virgifera virgifera, Western corn rootworm = US

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

ROOT = root

C = Crop is Part Rated

Rating Type

DAMINS = damage - insect

Rating Unit

0-3NCR = 0-3 Nodal corn rootworm scale

1-6ICR = 1-6 Iowa corn rootworm scale

PLOT = total plot

ROOT = root

Means followed by same letter or symbol do not significantly differ ( $P=.05$ , Student-Newman-Keuls).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Table 4 Assessments carried out on June the 26<sup>th</sup> to evaluate the pressure of *Diabrotica virgifera virgifera* as number of adults per trap.

Pest Type	I Insect	I Insect	I Insect	I Insect
Pest Code	DIABVI	DIABVI	DIABVI	DIABVI
Pest Scientific Name	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Variety	DKC5830	DKC5830	DKC5830	DKC5830
Rating Date	Jun-30-2020	Jul-8-2020	Jul-16-2020	Jul-22-2020
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C
Rating Type	COUINS	COUINS	COUINS	COUINS
Rating Unit	NUMBER	NUMBER	NUMBER	NUMBER
Sample Size	1 TRAP	1 TRAP	1 TRAP	1 TRAP
Collection Basis	4 TRAP	4 TRAP	4 TRAP	4 TRAP
Reporting Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	37 36 38	51 28 53	55 53 59	59 59 63
Rating Timing	A3	A4	A5	A6
Days After First/Last Applic.	74 74	82 82	90 90	96 96
Trt-Eval Interval	74 DA-A	82 DA-A	90 DA-A	96 DA-A
Plant-Eval Interval	74 DP-1	82 DP-1	90 DP-1	96 DP-1
ARM Action Codes				
Trt Treatment				
No.Name	Rate			
	RateUnit			
1 Marbles	6	8	13	17
microgranulators+mites	8kg/ha			
2 Untreated Check	0,5a	0,6b	0,7b	0,7b
3 Force Ultra	12,2kg/ha	0,8a	1,6a	2,1a
		0,3a	0,9b	0,8b
				1,1b
LSD P=.05	0,62	0,60	0,47	0,79
Standard Deviation	0,36	0,35	0,27	0,46
CV	67,53	34,39	23,26	35,18
Grand Mean	0,53	1,01	1,18	1,30
Bartlett's X2	5,37	0,084	1,627	1,211
P(Bartlett's X2)	0,068	0,959	0,443	0,546
Skewness	1,777*	0,5338	0,6356	0,5983
Kurtosis	5,2662*	-0,6736	-1,4207	-0,8038
Replicate F	0,223	0,709	1,112	0,287
Replicate Prob(F)	0,8773	0,5810	0,4152	0,8336
Treatment F	2,088	9,360	34,561	10,434
Treatment Prob(F)	0,2050	0,0143	0,0005	0,0111

Pest Type	I Insect	I Insect	I Insect	I Insect
Pest Code	DIABVI	DIABVI	DIABVI	DIABVI
Pest Scientific Name	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Variety	DKC5830	DKC5830	DKC5830	DKC5830
Rating Date	Jul-29-2020	Aug-6-2020	Aug-14-2020	Aug-20-2020
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C
Rating Type	COUINS	COUINS	COUINS	COUINS
Rating Unit	NUMBER	NUMBER	NUMBER	NUMBER
Sample Size	1 TRAP	1 TRAP	1 TRAP	1 TRAP
Collection Basis	4 TRAP	4 TRAP	4 TRAP	4 TRAP
Reporting Basis	1 PLOT	1 PLOT	1 PLOT	1 PLOT
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	65 63 65	67 65 69	71 71 73	75 73 79
Rating Timing	A7	A8	A9	AA
Days After First/Last Applic.	103 103	111 111	119 119	125 125
Trt-Eval Interval	103 DA-A	111 DA-A	119 DA-A	125 DA-A
Plant-Eval Interval	103 DP-1	111 DP-1	119 DP-1	125 DP-1
ARM Action Codes				
Trt Treatment				
No.Name	Rate			
	Unit			
1 Marbles	18	19	20	21
1 microgranulators+mites	0,7b	0,6b	0,3a	0,0a
2 Untreated Check	2,2a	1,3a	0,6a	0,1a
3 Force Ultra	0,8b	0,5b	0,4a	0,0a
LSD P=.05	0,57	0,36	0,37	0,15
Standard Deviation	0,33	0,21	0,21	0,09
CV	26,58	25,77	51,38	346,41
Grand Mean	1,23	0,80	0,42	0,03
Bartlett's X2	4,464	1,576	2,052	0,00
P(Bartlett's X2)	0,107	0,455	0,358	.
Skewness	0,5152	0,9364	0,9954	3,4641*
Kurtosis	-1,7579	0,381	3,3419*	12,0*
Replicate F	0,558	6,902	0,509	1,000
Replicate Prob(F)	0,6618	0,0226	0,6905	0,4547
Treatment F	27,729	16,059	2,964	1,000
Treatment Prob(F)	0,0009	0,0039	0,1273	0,4219

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Pest Type

I, Insect = Insect

Pest Code

DIABVI, Diabrotica virgifera virgifera, Western corn rootworm = US

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

PLANT = plant

C = Crop is Part Rated

Rating Type

COUINS = count - insect

Rating Unit

NUMBER = number

TRAP = trap

TRAP = trap

PLOT = total plot

Crop Stage Scale

BBCH = BBCH uniform plant stages

Crop Stage Majority/Min/Max

37 = 7 nodes detectable

51 = Beginning of tassel emergence: tassel detectable at tip of stem (VT = Tassel)

55 = Middle of tassel emergence: middle of tassel begins to separate

59 = End of tassel emergence: tassel fully emerged and separated

65 = Male:upper & lower tassel in flower. Female:stigmata fully emerged

67 = Male:flowering completed. Female:stigmata drying

71 = Beginning of grain development: kernel blister stage, about 16% dry matter (R2 = Blister)

75 = Kernels in middle of cob yellowish-white, content milky, about 40% dry matter

36 = 6 nodes detectable

53 = Tip of tassel visible

63 = Male:begin of pollen shedding. Female:tips of stigmata visible

73 = Early milk (R3 = Milk)

38 = 8 nodes detectable

69 = End of flowering: stigmata completely dry

79 = Nearly all kernels have reached final size

Rating Timing

A3 = 3rd Assessment According to Trial Schedule

A4 = 4th Assessment According to Trial Schedule

A5 = 5th Assessment According to Trial Schedule

A6 = 6th Assessment according to Trial Schedule

A7 = 7th Assessment According to Trial Schedule

A8 = 8th Assessment According to Trial Schedule

A9 = 9th Assessment According to Trial Schedule

AA = 10th Assessment According to Trial Schedule

Plant-Eval Interval

74 DP-1 = 1 ZEAMX Apr-17-2020

82 DP-1 = 1 ZEAMX Apr-17-2020

90 DP-1 = 1 ZEAMX Apr-17-2020

96 DP-1 = 1 ZEAMX Apr-17-2020

103 DP-1 = 1 ZEAMX Apr-17-2020

111 DP-1 = 1 ZEAMX Apr-17-2020

119 DP-1 = 1 ZEAMX Apr-17-2020

125 DP-1 = 1 ZEAMX Apr-17-2020



Table 5. Assessments of crop injury during the whole trial period.

Pest Type	I Insect		I Insect		I Insect		I Insect		I Insect	
Pest Code	DIABVI		DIABVI		DIABVI		DIABVI		DIABVI	
Pest Scientific Name	Diabrotica virgifera v>		Diabrotica virgifera v>		Diabrotica virgifera v>		Diabrotica virgifera v>		Diabrotica virgifera v>	
Crop Type, Code	C ZEAMX		C ZEAMX		C ZEAMX		C ZEAMX		C ZEAMX	
BBCH Scale	BCOR		BCOR		BCOR		BCOR		BCOR	
Crop Scientific Name	Zea mays		Zea mays		Zea mays		Zea mays		Zea mays	
Crop Name	Corn		Corn		Corn		Corn		Corn	
Crop Variety	DKC5830		DKC5830		DKC5830		DKC5830		DKC5830	
Rating Date	May-11-2020		Jun-12-2020		Jun-30-2020		Jul-8-2020		Jul-16-2020	
Part Rated	PLANT C		PLANT C		PLANT C		PLANT C		PLANT C	
Rating Type	PHYGEN		PHYGEN		PHYGEN		PHYGEN		PHYGEN	
Rating Unit	0-100		0-100		0-100		0-100		0-100	
Sample Size	1	PLOT	1	PLOT	1	PLOT	1	PLOT	1	PLOT
Collection Basis	1	PLOT	1	PLOT	1	PLOT	1	PLOT	1	PLOT
Reporting Basis	1	PLOT	1	PLOT	1	PLOT	1	PLOT	1	PLOT
Crop Stage Scale	BBCH		BBCH		BBCH		BBCH		BBCH	
Crop Stage Majority/Min/Max	13	12 14	34	32 35	37	36 38	51	28 53	55	53 59
Rating Timing	A1		A2		A3		A4		A5	
Days After First/Last Applic.	24	24	56	56	74	74	82	82	90	90
Trt-Eval Interval	24	DA-A	56	DA-A	74	DA-A	82	DA-A	90	DA-A
Plant-Eval Interval	24	DP-1	56	DP-1	74	DP-1	82	DP-1	90	DP-1
Trt Treatment	Rate		Rate		Rate		Rate		Rate	
No.Name	RateUnit		RateUnit		RateUnit		RateUnit		RateUnit	
1 Marbles	8kg/ha		8kg/ha		8kg/ha		8kg/ha		8kg/ha	
1 microgranulators+mites	0,0a		0,0a		0,0a		0,0a		0,0a	
2 Untreated Check	0,0a		0,0a		0,0a		0,0a		0,0a	
3 Force Ultra	12,2kg/ha		12,2kg/ha		12,2kg/ha		12,2kg/ha		12,2kg/ha	
3 Force Ultra	0,0a		0,0a		0,0a		0,0a		0,0a	
LSD P=.05	.		.		.		.		.	
Standard Deviation	0,00		0,00		0,00		0,00		0,00	
CV	0,0		0,0		0,0		0,0		0,0	
Grand Mean	0,00		0,00		0,00		0,00		0,00	
Bartlett's X2	0,00		0,00		0,00		0,00		0,00	
P(Bartlett's X2)	.		.		.		.		.	
Rank X2	.		.		.		.		.	
P(Rank X2)	.		.		.		.		.	
Skewness	.		.		.		.		.	
Kurtosis	.		.		.		.		.	
Replicate F	0,000		0,000		0,000		0,000		0,000	
Replicate Prob(F)	1,0000		1,0000		1,0000		1,0000		1,0000	
Treatment F	0,000		0,000		0,000		0,000		0,000	
Treatment Prob(F)	1,0000		1,0000		1,0000		1,0000		1,0000	

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls). Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL. Could not calculate LSD (% mean diff) for columns 2,5,7,9,16 because error mean square = 0.

Pest Type

I, Insect = Insect

Pest Code

DIABVI, Diabrotica virgifera virgifera, Western corn rootworm = US

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

PLANT = plant

ROOT = root

C = Crop is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

Rating Unit

0-100 = 0-100 index/scale-percent

PLOT = total plot

PLOT = total plot

PLOT = total plot

Crop Stage Scale

BBCH = BBCH uniform plant stages

Crop Stage Majority/Min/Max

13 = 3 leaves unfolded (V3 = Third Leaf)

34 = 4 nodes detectable

37 = 7 nodes detectable

51 = Beginning of tassel emergence: tassel detectable at tip of stem (VT = Tassel)

55 = Middle of tassel emergence: middle of tassel begins to separate

12 = 2 leaves unfolded (V2= Second Leaf)

32 = 2 nodes detectable

36 = 6 nodes detectable

53 = Tip of tassel visible

14 = 4 leaves unfolded (V4 = Fourth Leaf)

35 = 5 nodes detectable

38 = 8 nodes detectable

59 = End of tassel emergence: tassel fully emerged and separated

Rating Timing

A1 = 1st Assessment According to Trial Schedule

A2 = 2nd Assessment According to trial Schedule

A3 = 3rd Assessment According to Trial Schedule

A4 = 4th Assessment According to Trial Schedule

A5 = 5th Assessment According to Trial Schedule

Plant-Eval Interval

24 DP-1 = 1 ZEAMX Apr-17-2020

56 DP-1 = 1 ZEAMX Apr-17-2020

74 DP-1 = 1 ZEAMX Apr-17-2020

82 DP-1 = 1 ZEAMX Apr-17-2020

90 DP-1 = 1 ZEAMX Apr-17-2020

Table 6. Yield, moisture content at harvest time and post-harvest analyses: results and statistical analysis.

Pest Type	I Insect	I Insect	I Insect	I Insect
Pest Code	DIABVI	DIABVI	DIABVI	DIABVI
Pest Scientific Name	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v	Diabrotica virgifera v
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX	C ZEAMX
BBCH Scale	BCOR	BCOR	BCOR	BCOR
Crop Scientific Name	Zea mays	Zea mays	Zea mays	Zea mays
Crop Name	Corn	Corn	Corn	Corn
Crop Variety	DKC5830	DKC5830	DKC5830	DKC5830
Rating Date	Oct-2-2020	Oct-2-2020	Oct-2-2020	Oct-12-2020
Part Rated	YIELD C	YIELD C	YIELD C	YIELD C
Rating Type	MOICON	YIELD	HLW	TKW
Rating Unit	%	Q-MET	Kg/hL	g
Sample Size	1 SAMPLE	1 m2	1 SAMPLE	1 SAMPLE
Collection Basis	1 PLOT	1 Plot	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 ha	1 PLOT	1 PLOT
Crop Stage Scale	BBCH	BBCH	BBCH	BBCH
Crop Stage Majority/Min/Max	99 99 99	99 99 99	99 99 99	99 99 99
Rating Timing	AA	AA	AA	AA
Days After First/Last Applic.	168 168	168 168	168 168	178 178
Trt-Eval Interval	168 DA-A	168 DA-A	168 DA-A	178 DA-A
Plant-Eval Interval	168 DP-1	168 DP-1	168 DP-1	178 DP-1
Trt Treatment				
No.Name	Rate			
	RateUnit			
	22	23	24	25
1 Marbles				
microgranulators+mites	8kg/ha			
	23,9a	10,5a	59,9a	392,2a
2 Untreated Check				
	25,5a	4,2b	58,7a	379,5a
3 Force Ultra	12,2kg/ha			
	23,8a	9,6a	60,4a	384,8a
LSD P=.05	2,14	1,38	2,28	12,60
Standard Deviation	1,24	0,80	1,32	7,28
CV	5,07	9,86	2,21	1,89
Grand Mean	24,40	8,09	59,66	385,46
Bartlett's X2	0,061	3,671	0,783	1,469
P(Bartlett's X2)	0,97	0,16	0,676	0,48
Rank X2	.	.	.	.
P(Rank X2)	.	.	.	.
Skewness	0,5207	-0,8975	0,0932	0,325
Kurtosis	-0,134	-0,7664	-0,3853	1,0918
Replicate F	1,190	3,581	2,041	0,395
Replicate Prob(F)	0,3899	0,0860	0,2097	0,7616
Treatment F	2,493	73,624	1,733	3,089
Treatment Prob(F)	0,1629	0,0001	0,2547	0,1196

Pest Type

I, Insect = Insect

Pest Code

DIABVI, Diabrotica virgifera virgifera, Western corn rootworm = US

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Part Rated

YIELD = yield

C = Crop is Part Rated

Rating Type

MOICON = moisture content

YIELD = yield

HLW = weight 100 Ltr (hl)

TKW = weight thousand kernel

Rating Unit

% = percent

Q-MET = quintal (metric=100 kg)

Kg/hL = kilogram per hectoliter

g = gram

SAMPLE = sample

m2 = square meter

PLOT = total plot

PLOT = total plot

ha = hectare

Crop Stage Scale

BBCH = BBCH uniform plant stages

Crop Stage Majority/Min/Max

99 = Harvested product

Rating Timing

AA = 10th Assessment According to Trial Schedule

Plant-Eval Interval

168 DP-1 = 1 ZEAMX Apr-17-2020

178 DP-1 = 1 ZEAMX Apr-17-2020

Means followed by same letter or symbol do not significantly differ ( $P=.05$ , Student-Newman-Keuls).  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

## 5.2 Graphics

Figure 1. Values of N-tester on maize leaves conducted with the SPAD and the Greenseeker indexes, on June the 12<sup>nd</sup> and on July 16<sup>th</sup>.

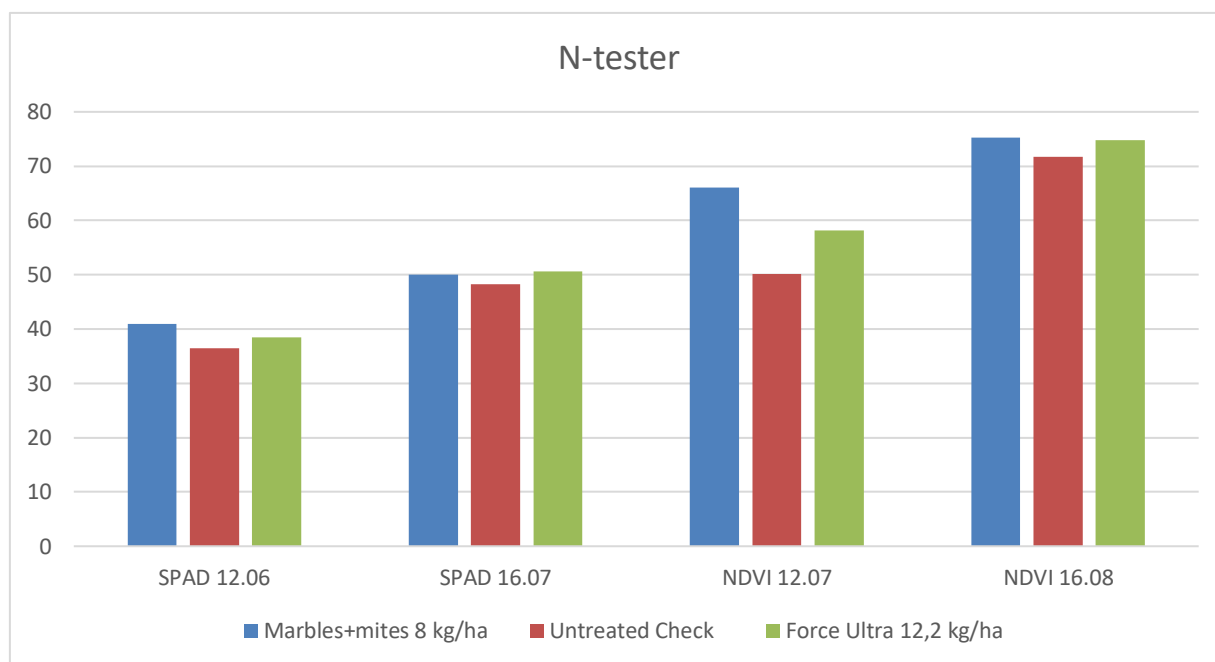


Figure 2. Root damages by *Diabrotica virgifera virgifera* evaluated with Iowa scale carried out on July the 16<sup>th</sup>.

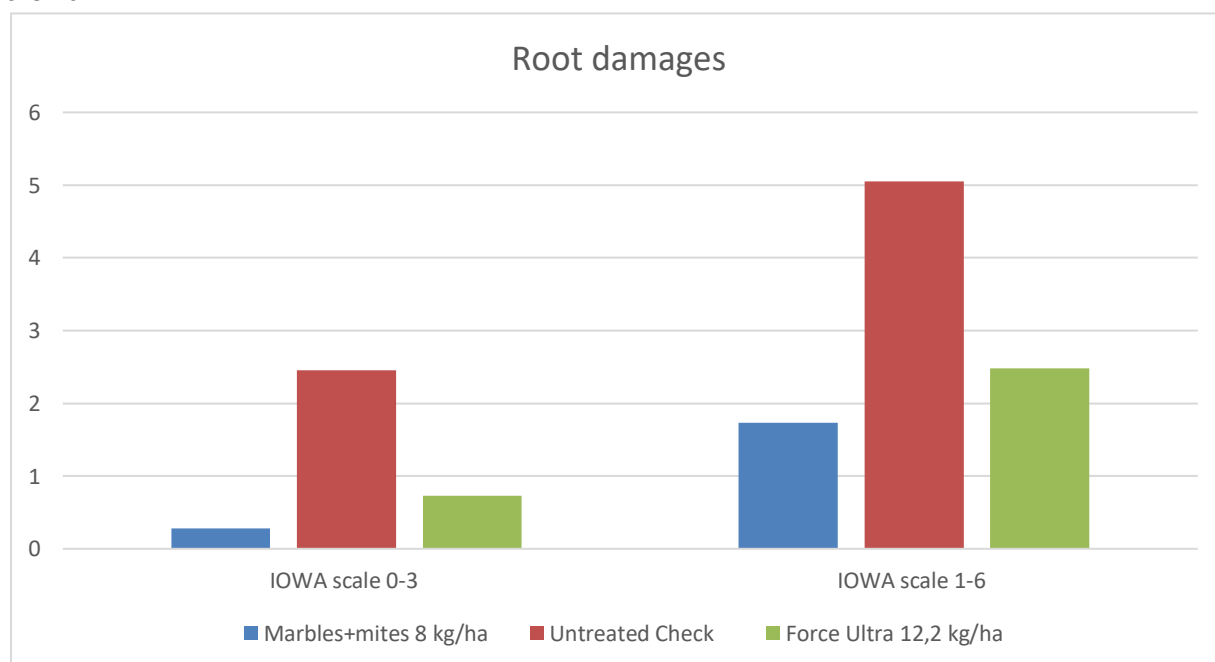


Table 3. The pressure of *Diabrotica virgifera virgifera* as number of adults per trap, carried out on June the 26<sup>th</sup>.

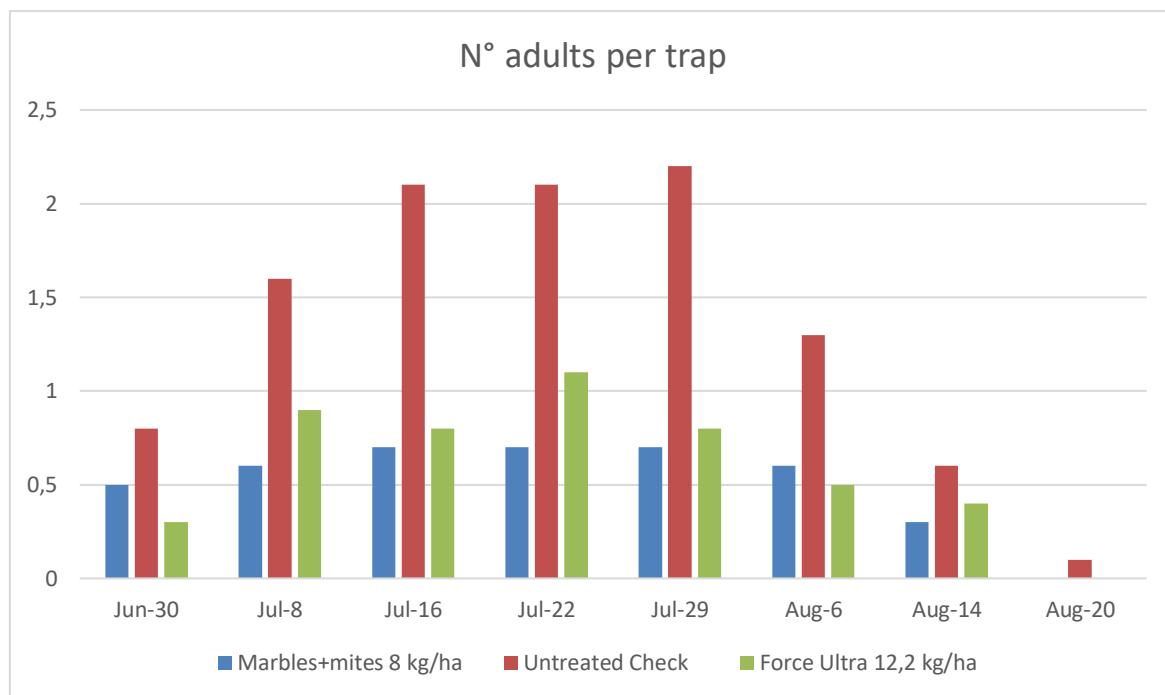
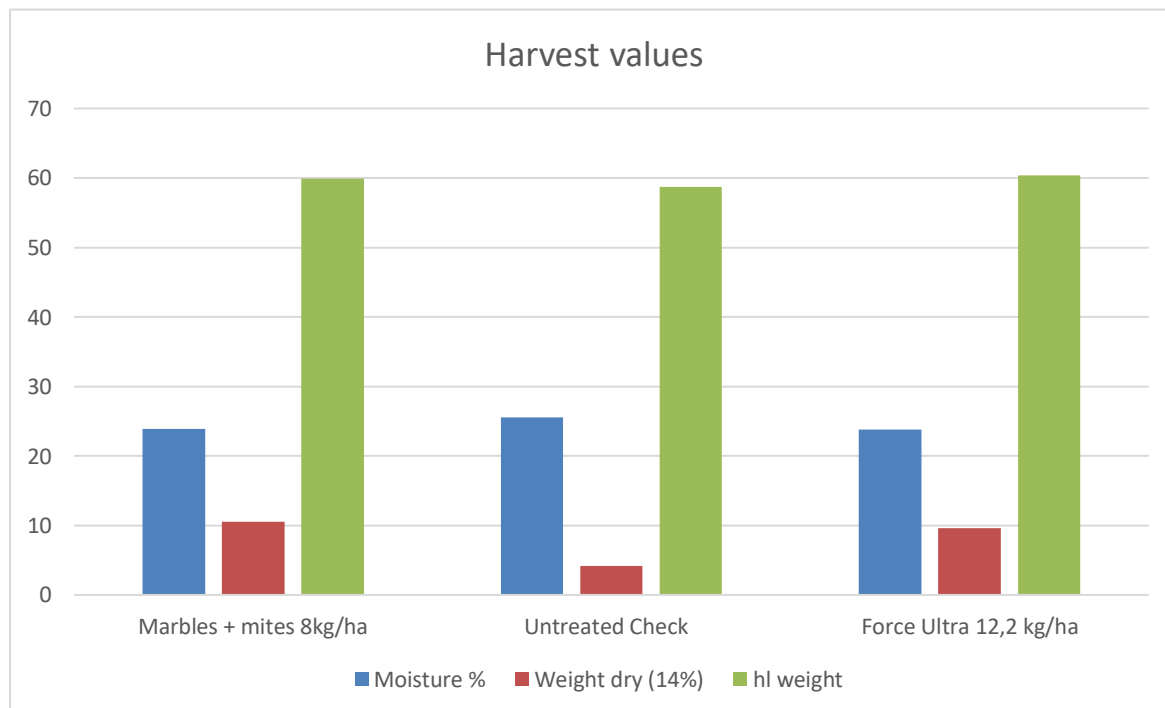


Table 4. Yield, moisture content and weight 100 Ltr (hl) at harvest time.



### 5.3 General discussion

The crop was sowed using a Baural pneumatic plot drilling machine (Sagea code SG03) on April the 17<sup>th</sup>, in typical corn production area. On May the 11<sup>st</sup>, at BBCH 12-14, was done the emerged plants assessment. No significant differences were noticed among treatments, with values between 6.1 and 6.2 plants per square meters.

#### Assessments on leaves nutrient status

The assessments on leaves nutrient status were carry out two times, on June the 12<sup>th</sup> and on July the 16<sup>th</sup>, through two different tools: the Greenseeker (NDVI) and the SPAD.

Both, the N-testers, were performed into the microplot of T1 and on the two central rows in T2 and T3. The first assessment, carry out on June the 12<sup>th</sup> at 7-8 leaf stage, showed significant differences among the treatments in terms of NDVI (Normalized Difference Vegetation Index); the values ranged from 36.5 (T2) TO 41.0 (T1).

During the second assessment, carry out on July the 16<sup>th</sup> at the flowering stage, no significant differences were noticed among treatments in terms of NDVI and SPAD; the values ranged from 71.7 (T2) to 75.3 (T1) and from 48.3 (T2) 50.6 (T3), respectively.

#### Assessments on roots

The assessment on root damages was carried out on July the 16<sup>th</sup>, at crop BBCH 55, after the appearance of first adults (monitored using chromotropic traps placed in the trial area). On treatments 2 and 3, ten plants per plot, randomly selected, were dug out on the two central rows and cleaned in order to evaluate the root damages caused by the *Diabrotica virgifera virgifera* larval attack. On treatments 1, three maize plants were dug out on the micro-plot areas inside each plot. Root damages were evaluated using the IOWA 0-3 and 1-6 scales.

Both IOWA scales, underline a significant difference between the untreated and treated plots in terms of roots damages caused by the *Diabrotica virgifera virgifera*. The results from the microplots where was spreading the marble plus the mites showed slightly effect compared with the conventionally products (Force Ultra) even if no supported by statistical analysis.

#### Assessments on traps

Another evaluation on *Diabrotica virgifera virgifera* was to determine the attack level using the box-traps. On June the 16<sup>th</sup>, four box-traps per plot (one per micro-plot in T1) were placed to capture the adults and evaluate the infestation on soil through the presence of adult per each trap. During the trial eight assessments were done in order to evaluate and monitoring the infestation.

The assessments were done on June the 30<sup>th</sup>, July the 8<sup>th</sup>, the 16<sup>th</sup>, the 22<sup>nd</sup> and the 29<sup>th</sup>, on August the 6<sup>th</sup>, the 14<sup>th</sup> and the 20<sup>th</sup>, and the number of adults per trap was recorded.

During the first assessment no significant differences were noticed among the treatments, the values ranged from 0.3 (T3) to 0.8 adults per trap on T2. For the next five assessments the number of adults per trap on the Untreated check (T2) was always significantly higher the T1 and T2.

The highest numbers of adults per trap were recorded on July the 29<sup>th</sup>, at maize BBCH 63-65; during this assessment the values of T1, T2 and T3 were 0.7, 2.2 and 0.8, respectively.

#### Harvest

At harvest time, on October the 2<sup>nd</sup>, quantitative and qualitative parameters (yield, grain moisture, hectolitre weight and thousand kernel weight) were determined; only the yield at 14% of humidity, showed a significant differences among the T2 and the treated plots. In terms of value absolute, the highest yield at 14% U.R was observed on treatment 1 (marbles plus mites) with 10,50 t/ha, the lowest on the untreated check with 4.2 t/ha. On hectolitre weight values ranged between 58.7 kg/hl on treatment 2 and 60.4 kg/hl on treatments 3; On thousand kernel weight values ranged between 379.5 g on treatment 2 and 392.2 g on treatments 1.

**Phytotoxicity and crop vigor**

During the trial five assessments were done in order to evaluate any phytotoxic symptoms due to the products applications on the crop. Assessments were done on May the 11<sup>th</sup>, on June the 12<sup>th</sup> and 30<sup>th</sup>, and on July the 8<sup>th</sup> and the 16<sup>th</sup>.

No phytotoxic symptoms were observed in the trial area showing the full selectivity of test products on maize (DKC5830 variety).

**5.4 Conclusions**

During the trial occurred a high attack of *Diabrotica virgifera virgifera*.

The untreated control showed significant lower results in terms of yield compared with the other two treatments.

The treatments with Force Ultra and with the marbles plus predatory mites, achieved significant better results compared with the negative control in term of root damage and insect pressure (n° of adults per emergence cages).

No phytotoxic symptoms were observed in the trial area showing the full selectivity of test products on maize (DKC5830 variety).



## 6APPENDICES

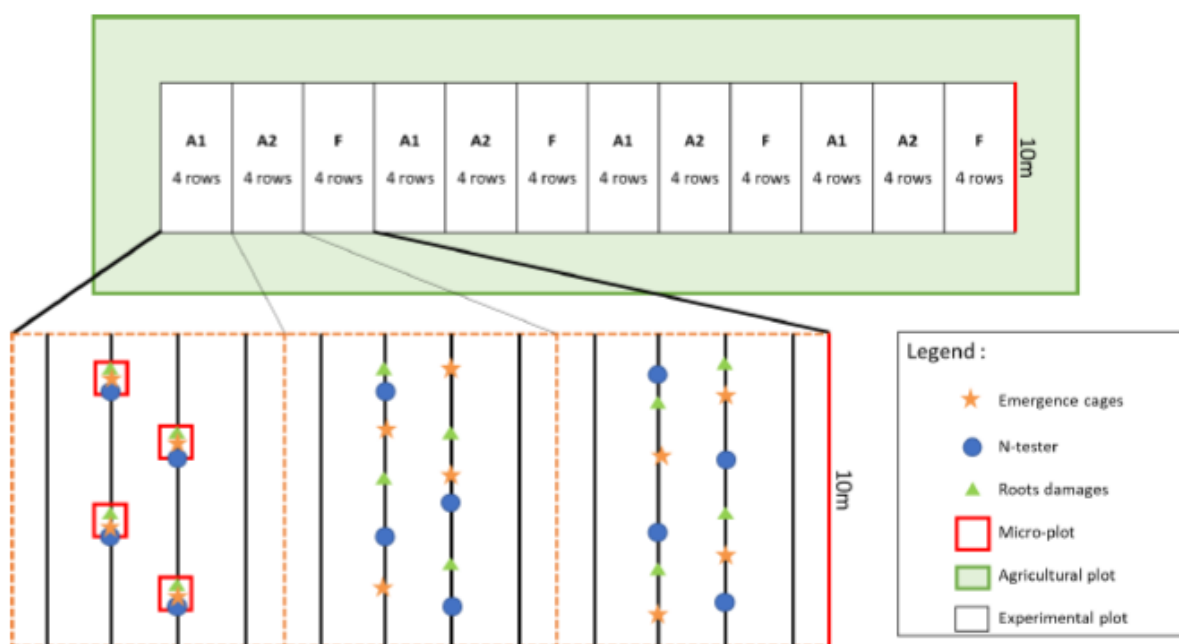
### 6.1 Appendix 1 – Plot layout

#### Trial Map Treatment Description

Trt No.	Type	Treatment name
1	PROD	Marbles microgranulators+mites
2	CHK	Untreated Check
3	INSE	Force Ultra

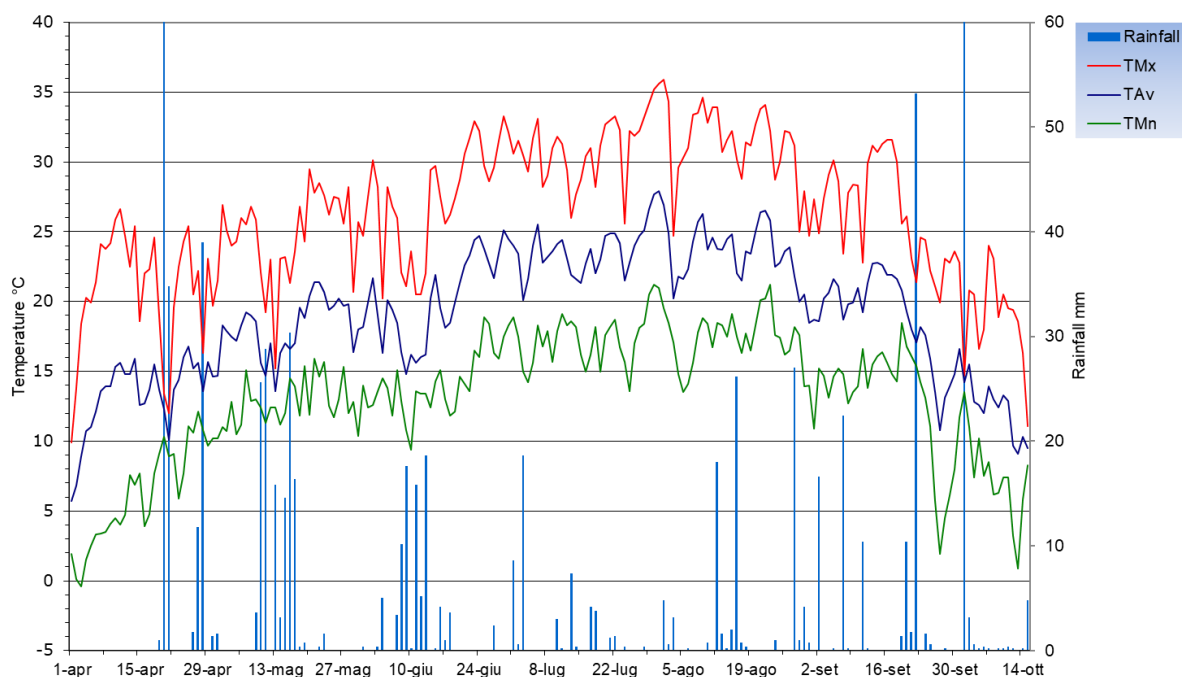


#### Diagram of the experiment



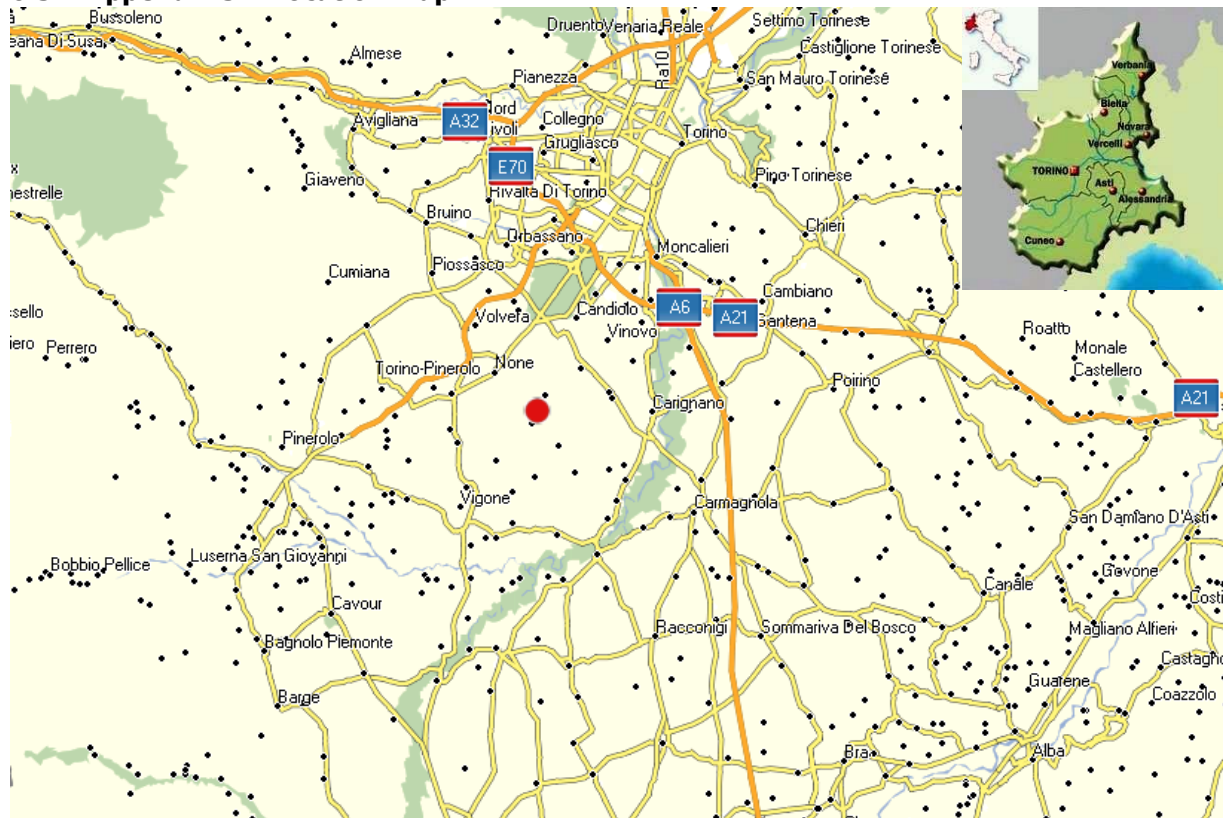
## 6.2 Appendix 2 – Weather data

### Closest Weather Station: Lombriasco (TO)



- PGg= Rainfalls (mm);
- TAv= Average daily temperature(°C);
- TMxg= Maximum daily temperature (°C);
- TMng= Minimum daily temperature (°C).

### 6.3 Appendix 3 – Location map



## 6.4 Appendix 4 – GEP certificate

DG DISR - DISR 05 - Prot. Uscita N.0021225 del 05/07/2018



*Ministero delle politiche agricole  
alimentari e forestali*

DIPARTIMENTO DELLE POLITICHE EUROPEE ED INTERNAZIONALI E DELLO SVILUPPO RURALE  
DIREZIONE GENERALE DELLO SVILUPPO RURALE  
DISR V

**CERTIFICATO DI CONFORMITA' ALLA BUONA PRATICA PER  
L'ESECUZIONE DELLE PROVE DI CAMPO**

(Decreto Legislativo 17 marzo 1995, n. 194)

Ai sensi dell'articolo 4, commi 5, 7 e 8 del Decreto Legislativo 17 marzo 1995, n. 194 e tenuto conto dell'esito favorevole dell'ispezione effettuata in data 20 aprile 2018

**SI CERTIFICA**

Che il Centro di saggio "SAGEA Centro di Saggio s.r.l." con sede legale in Via San Sudario 15 – 12050 Castagnito d'Alba (CN), è riconosciuto idoneo a proseguire nelle prove ufficiali di campo con prodotti fitosanitari volte ad ottenere le seguenti informazioni:

- Efficacia dei prodotti fitosanitari (di cui all'Allegato III, punto 6.2 del decreto legislativo 194/95);
- Dati sulla comparsa o eventuale sviluppo di resistenza (di cui all'Allegato III, punto 6.3 del decreto legislativo 194/95);
- Incidenza sulla resa quantitativa e/o qualitativa (di cui all'Allegato III, punto 6.4 del decreto legislativo 194/95);
- Fitotossicità nei confronti delle piante e prodotti vegetali bersaglio (di cui all'Allegato III, punto 6.5 del decreto legislativo 194/95);
- Osservazioni riguardanti gli effetti collaterali indesiderabili (di cui all'Allegato III, punto 6.6 del decreto legislativo 194/95);
- Individuazione dei prodotti di degradazione e di reazione dei metaboliti in piante o prodotti trattati (di cui all'allegato II, punto 6.1 del decreto legislativo 194/95);
- Valutazione del comportamento dei residui delle sostanze attive e dei suoi metaboliti a partire dall'applicazione fino al momento della raccolta o della commercializzazione dei prodotti immagazzinati (di cui all'allegato II, punto 6.2 del decreto legislativo 194/95);
- Definizione del bilancio generale dei residui delle sostanze attive (di cui all'allegato II, punto 6.3 del decreto legislativo 194/95);
- Prove relative agli effetti della lavorazione industriale e/o preparazione domestica sulla natura e sull'entità dei residui (di cui all'allegato II, punto 6.6 del decreto legislativo 194/95);
- Prove su destino e comportamento ambientale (di cui all'allegato II, punti 7.1 e 7.2 del decreto legislativo 194/95);
- Studi ecotossicologici relativi agli effetti su organismi non bersaglio (di cui all'Allegato II, punto 8.3 del decreto legislativo 194/95);

**SAGEA Centro di Saggio s.r.l.**

Società certificata dal Ministero dell'Agricoltura e dal Ministero della Salute a condurre prove di campo con prodotti fitosanitari in GEP e GLP  
Via S. Sudario, 15 - 12050 Castagnito d'Alba (CN) - Italy - Tel. +39 0173 212614 - Fax +39 0173 210970  
E-mail: info@sagea.com - Cod. Fisc./P.IVA 03494600046 Cap.Soc.int.vers. € 50.000,00



*Ministero delle politiche agricole  
alimentari e forestali*

DIPARTIMENTO DELLE POLITICHE EUROPEE ED INTERNAZIONALI E DELLO SVILUPPO RURALE  
DIREZIONE GENERALE DELLO SVILUPPO RURALE  
DISR V

- Studi ecotossicologici relativamente all'ottenimento dei dati sull'esposizione (Allegato III, Punto 7.2 del decreto legislativo 194/95);
- Determinazione dei residui in o su prodotti trattati, alimenti per l'uomo o per gli animali (di cui all'Allegato III, punto 8.1 del decreto legislativo 194/95);
- Prove relative agli effetti della lavorazione industriale e/o preparazione domestica sulla natura e sull'entità dei residui (Allegato III, Punto 8.2 del decreto legislativo 194/95);
- Effetti sull'aspetto, l'odore, il gusto o altri aspetti qualitativi dovuti ai residui nei o sui prodotti freschi o lavorati (Allegato III, Punto 8.3 del decreto legislativo 194/95);
- Valutazione dei dati sui residui nelle colture successive o di rotazione (di cui all'Allegato III, punto 8.5 del decreto legislativo 194/95);
- Individuazione dei tempi di carenza per impieghi in pre-raccolta o post-raccolta (di cui all'Allegato III, punto 8.6 del decreto legislativo 194/95);
- Studi ambientali ed ecotossicologici (di cui all'Allegato III, punti 9 e 10 del decreto legislativo 194/95 e successive modifiche).

Detto riconoscimento riguarda le prove di campo di efficacia e le prove di campo finalizzate alla determinazione dell'entità dei residui di prodotti fitosanitari nei seguenti settori di attività:

- Aree acquatiche;
- Aree non agricole
- Colture arboree;
- Colture erbacee;
- Colture forestali;
- Colture medicinali ed aromatiche;
- Colture ornamentali;
- Colture orticole;
- Concia delle sementi;
- Conservazione post-raccolta;
- Diserbo;
- Entomologia;
- Microbiologia agraria;
- Nematologia;
- Patologia vegetale;
- Zoologia agraria;
- Produzione sementi;
- Vertebrati dannosi;
- Fitoregolatori;
- Vinificazione e trasformati.





*Ministero delle politiche agricole  
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DIREZIONE GENERALE DELLO SVILUPPO RURALE  
DISR V

Inoltre il riconoscimento delle prove di campo finalizzate alla determinazione dell'entità dei residui riguarda anche il settore di attività "Colture in vivaio".

**Il presente certificato ha la validità di mesi 24 dalla data di ispezione.**

Il Centro "SAGEA Centro di Saggio s.r.l.", qualora intenda confermare o variare gli ambiti operativi di cui al presente decreto, potrà inoltrare apposita istanza, almeno sei mesi prima della data di scadenza, corredata dalla relativa documentazione comprovante il possesso dei requisiti richiesti.

Roma, li

10/5 LUG 2018

Il Direttore Generale  
Emilio Gatto

Certificazione SAGEA

**SAGEA Centro di Saggio s.r.l.**

Società certificata dal Ministero dell'Agricoltura e dal Ministero della Salute a condurre prove di campo con prodotti fitosanitari in GEP e GLP  
Via S. Sudario, 15 - 12050 Castagnito d'Alba (CN) - Italy - Tel. +39 0173 212614 - Fax +39 0173 210970  
E-mail: info@sagea.com - Cod. Fisc./P.IVA 03494600046 Cap.Soc.int.vers. € 50.000,00

## **MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI**

DECRETO 23 aprile 2020

Proroga del riconoscimento dell'idoneità ai Centri di saggio ad effettuare prove ufficiali di campo, finalizzate alla registrazione dei prodotti fitosanitari. (20A02852)

(GU n.138 del 30-5-2020)

IL DIRETTORE GENERALE  
dello sviluppo rurale

Visto il decreto legislativo 17 marzo 1995, n. 194 che, in attuazione della direttiva 91/414/CEE, disciplina l'immissione in commercio dei prodotti fitosanitari;

Visti in particolare i commi 5, 6, 7 e 8 dell'art. 4 del predetto decreto legislativo n. 194/1995, sulla base dei quali il riconoscimento degli organismi ufficiali preposti alla effettuazione delle prove di campo, ai fini dell'autorizzazione di un prodotto fitosanitario, è effettuato con decreto del Ministro delle risorse agricole, alimentari e forestali, su richiesta documentata degli interessati e il mantenimento di tale riconoscimento è subordinato all'esito favorevole di ispezioni periodiche e regolari;

Visto il decreto del Ministro della sanità del 28 settembre 1995 che modifica gli allegati II e III del suddetto decreto legislativo n. 194/1995;

Visto il decreto interministeriale 27 novembre 1996 che, in attuazione di quanto disposto dal comma 6 dell'art. 4 del citato decreto legislativo n. 194/1995, definisce i principi delle buone pratiche per l'esecuzione delle prove di campo che i requisiti necessari al riconoscimento ufficiale dell'idoneità degli enti preposti a condurre prove di campo finalizzate alla registrazione dei prodotti fitosanitari;

Visto il decreto legislativo 30 luglio 1999, n. 300, di riforma dell'organizzazione di governo a norma dell'art. 11 della legge 15 marzo 1997, n. 59;

Visto il decreto legislativo 30 marzo 2001, n. 165, relativo alle «norme generali sull'ordinamento del lavoro alle dipendenze delle amministrazioni pubbliche», in particolare l'art. 4, commi 1 e 2 e l'art. 16, comma 1;

Visto il decreto ministeriale n. 6834 del 27 giugno 2019 recante «Individuazione degli uffici dirigenziali non generali del Mipaaf, ai sensi del decreto del Presidente del Consiglio dei ministri n. 25 dell'8 febbraio 2019»;

Visto il decreto-legge 21 settembre 2019, n. 104, recante «Disposizioni urgenti per il trasferimento di funzioni e per la riorganizzazione dei Ministeri per i beni e le attività culturali, delle politiche agricole alimentari, forestali e del turismo, dello sviluppo economico, degli affari esteri e della cooperazione

internazionale, delle infrastrutture e dei trasporti e dell'ambiente e della tutela del territorio e del mare, nonché per la rimodulazione degli stanziamenti per la revisione dei ruoli e delle carriere e per i compensi per lavoro straordinario delle Forze di polizia e delle Forze armate e per la continuità delle funzioni dell'Autorità per le garanzie nelle comunicazioni» convertito con modificazioni dalla legge 18 novembre 2019, n. 132;

Visto il decreto del Presidente del Consiglio dei ministri del 4 novembre 2019, registrato alla Corte dei conti il 15 novembre 2019, con il quale è stato conferito al dott. Emilio Gatto, dirigente di prima fascia, l'incarico di direttore generale della Direzione generale dello sviluppo rurale del Dipartimento delle politiche europee e internazionali e dello sviluppo rurale;

Visto il decreto del Presidente del Consiglio dei ministri 5 dicembre 2019, n. 179, inerente il regolamento di riorganizzazione del Ministero delle politiche agricole alimentari e forestali, a norma dell'art. 1, comma 4, del decreto-legge 21 settembre 2019, n. 104, convertito, con modificazioni, dalla legge 18 novembre 2019, n. 132;

Visto il decreto del Presidente del Consiglio dei ministri 11 marzo 2020 recante «Ulteriori misure in materia di contenimento e gestione dell'emergenza epidemiologica da COVID-19 sull'intero territorio nazionale»

Vista la direttiva dipartimentale del 1° aprile 2020, n. 1141, registrata all'UCB al n. 287 in data 2 aprile 2020;

Vista la direttiva direttoriale 14 aprile 2020, n. 12841, in corso di registrazione presso l'Ufficio centrale di bilancio di questo Ministero, finalizzata all'attuazione degli obiettivi definiti dalla direttiva del Capo Dipartimento delle politiche europee e internazionali e dello sviluppo rurale - DIPEISR, del 1° aprile 2020, n. 1141;

Considerato che, in osservanza alle misure contenute nel decreto del Presidente del Consiglio dei ministri di cui sopra, le ispezioni finalizzate alla verifica dell'idoneità degli Centri di saggio preposti ad effettuare l'esecuzione di prove di campo per valutare l'efficacia di prodotti fitosanitari di nuova formulazione, non possono essere effettuate;

Considerato che i Centri di saggio riconosciuti da questo Ministero per l'esecuzione delle prove di che trattasi, devono comunque garantire ai committenti la propria idoneità;

Ritenuto di dover prorogare l'idoneità dei Centri di saggio in scadenza dal 6 aprile al 31 luglio 2020, sino al 31 dicembre 2020, al fine di espletare le previste verifiche ispettive;

Decreta:

#### Articolo unico

1. L'idoneità ad effettuare prove ufficiali di campo dei Centri di saggio di cui all'allegato 1 del presente decreto è prorogata fino al 31 dicembre 2020;

2. Le visite ispettive, previste ai sensi del decreto legislativo n. 194/1995, finalizzate alla verifica dei Centri di saggio di cui all'allegato 1, nonché di tutti i restanti Centri di saggio la cui idoneità è in scadenza nell'anno in corso, saranno espletate non appena verrà dichiarata conclusa l'emergenza legata al contenimento e gestione del COVID-19 sull'intero territorio nazionale.

Il presente decreto sarà pubblicato nella Gazzetta Ufficiale della Repubblica italiana.

Roma, 23 aprile 2020



Il direttore generale: Gatto

Allegato 1

Centri di saggio per i quali l'idoneità e' prorogata  
al 31 dicembre 2020

Centro di Saggio	Scadenza prevista
Anadiag Italia Srl Strata Comunale Savonese, 9 15050 Rivalta Scrivia Tortona (AL)	23 giugno 2020
Centro «VIT.EN & C. sas» Via Bionzo, 13-bis 14052 Calosso (AT)	10 aprile 2020
Centro «Centro di ricerca sperimentazione e formazione in agricoltura - Basile Caramia» Via Cisternino, 281 70010 Locorotondo (BA)	27 aprile 2020
Centro «AgroService R&S S.r.l.» Viale Istria, 114 76123 Andria (BT)	30 aprile 2020
Centro «Eurofins Agrosience Services S.r.l.» Via XXV Aprile, 8/2 - 8/3 40016 San Giorgio di Piano (BO)	6 aprile 2020
Centro «Coop. Produttori Bieticoli Soc. coop. agricola - CO.PRO.B.» Via Mora, 56 40061 Minerbio (BO)	23 maggio 2020
Centro «Consorzio Agrario dell'Emilia - Societa' cooperativa» Via Centese, 5/3 40016 San Giorgio di Piano (BO)	20 aprile 2020
Agri2000 Net S.r.l. Via Marabini, 14/A 40013 Castel Maggiore (BO)	4 maggio 2020
Biofarm Srl Via Mazzini, 1 81047 Macerata Campania (CE)	16 giugno 2020
Centro «Sagea Centro di Saggio S.r.l.» Via San Sudario, 15 12050 Castagnito d'Alba (CN)	20 aprile 2020
Centro «S.P.F. S.r.l.» Via Altiero Spinelli, 12 44028 Poggio Renatico (FE)	17 aprile 2020
Bayer Crop Science Srl Viale Certosa, 130	28 maggio

**SAGEA Centro di Saggio s.r.l.**

Società certificata dal Ministero dell'Agricoltura e dal Ministero della Salute a condurre prove di campo con prodotti fitosanitari in GEP e GLP  
Via S. Sudario, 15 - 12050 Castagnito d'Alba (CN) - Italy - Tel. +39 0173 212614 - Fax +39 0173 210970  
E-mail: info@sagea.com - Cod. Fisc./P.IVA 03494600046 Cap.Soc.int.vers. € 50.000,00

Milano	2020
Charles River Laboratories V.le Majno, 17 20122 Milano	25 maggio 2020
Isagro S.p.A. Via Galdera, 21 20153 Milano	6 giugno 2020
SGS Italia S.p.A. Via G. Gozzi, 1/a 20129 Milano	22 giugno 2020
Centro «Agroblu S.r.l.» Via S. Bernardo, 35 20017 Rho (MI)	7 aprile 2020
Centro «Agricola 2000 S.c.p.a.» Via Trieste, 9 20067 Tribiano (MI)	5 maggio 2020
Centro di Saggio Alsia - «Centro ricerche Metapontum Agrobios» S.S. Jonica 106, Km 448,2 75010 Metaponto (MT)	25 luglio 2020
Centro «Cooperativa Terremense» Via Ca' del Vento, 21 48012 Bagnacavallo (RA)	20 aprile 2020
Centro «Consorzio Agrario di Ravenna» Via Madonna di Genova, 39 48010 Cotignola (RA)	4 maggio 2020
Centro «Promovert Italia S.r.l.» Via Marzabotto, 51 48024 Massa Lombarda (RA) (tel. 347/1401194) massimiliano.landini@promovert.com	20 aprile 2020
Societa' «Bioecopest S.r.l.» S.P. 55 Porto Conte/Capo Caccia 07041 Alghero (SS)	27 luglio 2020
Repros Srl Via dell'Industria, 14/b 36045 Alonte (VI)	23 giugno 2020
Centro «Agrolis Consulting S.r.l.» Via Fontanelle, 52 37055 Ronco all'Adige (VR)	21 aprile 2020
Centro «Agrea S.r.l.» Via G. Garibaldi, 5 37057 S. Giovanni Lupatoto (VR)	27 aprile 2020