



**OPENGREEN**



**Tests of field vine**

**Advanced integration viticulture**

**by Open Green**



## Advanced integration viticulture by Open Green

Open Green products initiated as foliar feeders with a stimulating action; they have



been devised for being integrated into the conventional defence of the vine, improving the efficiency of plant protection products and increasing the plant's response in the face of a

pathogen attack. One of the conditions required by modern viticulture, **is the need to lower residues of plant protection products**. This is possible by using products with a low environmental impact with great potential for reinforcing the vines through natural processes, such as the stimulation of production of phytoalexins by the plant, allowing it to develop a better reaction with regard to the disease.

**Opengreen** is a company which produces foliar feeders and works to make the double benefit of production and quality; it proposes a complete range of products aimed at improvement of the plant's reply with regard to maladies such as OIDIUM and PERONOSPORA, still from the viewpoint of avant-garde defence.

In Italy, viticulture has always been a symbol of quality and excellence in the worldwide grape and wine sector. The Italian peninsula boasts more than **300 varieties of Wine Grape**, each subject to specific regulations and belonging to a specific **DOCG, DOC, IGT, DOP, IGP, STG**. Nevertheless, this variety is matched by a smaller number of fungal diseases. **Opengreen** has chosen to concentrate on the most dreaded and widespread fungal diseases: **PLASMOPARA VITICOLA**, commonly known as **PERONOSPORA**.



The aim is that of reducing as far as possible the possible use of products which create an accumulation in the plant of the active ingredients which are damaging to the environment and, above all, are obstacles to a correct and healthy wine production..

The most used active ingredient for combatting this pathogen is **COPPER (Cu)**. Copper is available in various forms and is also the only product admissible for **organic agriculture**.

On the other hand, copper has various disadvantages:

- **It is exclusively a prevention product**; after every rainfall, it is necessary to restore the cover, but in the event of infection, the product can only contain it, not cure it;
- Copper is a metal which tends to accumulate in the soil and in the plant, creating pollution problems in the ground and problems of toxicity in the plant. For this reason, **the European Union has established a maximum quantity of 6 Kg/ha of copper to be used in a year**. In very rainy years, therefore, being most favourable for the development of peronospora, the 6 Kg/ha limit has become a great inconvenience for guaranteeing the health of the plant.
- In addition to copper, for defence against peronospora, many other active ingredients are used such as: **Dithiocarbamates, amides of carboxylic acid, phthalimides, phenylamides, etc**. These are all products which have greater persistence and curative effect compared with copper; **on the other hand, if used more than 3 times per year, they have the ability of creating resistances and adaptation in the fungus**. It is possible to reduce the use of these products and at the same time lower the use of copper.

Open Green has designed a line of fertilisers especially recommended for integration of the lines usually used. These are products which were born as leaf feeders with actions of **BIO-INDUCTION**. These products are designed to be integrated into the conventional defences, to work to improve the efficiency of the plant protection products and to stimulate the plant in the production of phytoalexin which improves the response with regard to the pathogen attack. This **INTEGRATION** allows for notably lowering the residues caused by plant protection product treatments.



The **Open Green** line is made up of 5 products:

- **RAMENDO:** Copper 3% chelate with EDTA, Iron 0.5% chelate with EDTA. This particular formulation makes Ramendo a unique product; indeed, it is an endotherapy which falls within the leaf parenchyma and resists wash off for 8 days. Its low percentage of Copper makes it ideal, even for organic agriculture.
- **INCAS:** Manganese 3% chelate with EDTA and Zinc 1% chelate with EDTA; also, endotherapeutic, resistant to wash out and is suitable for use in organic agriculture.
- **VEGETIK:** Phosphoric anhydride 25% and Potassium oxide 20%; Potassium phosphate is a systemic product, uniting with Ramendo and Incas creates a synergy which strengthens the effects.
- **LUXURY:** tribasic copper 17%, elementary sulphur 27%. Luxury rapidly corrects shortfalls in copper and sulphur and furthermore improves the physiological state of the plant, preventing and supporting control over the most widespread plant pathologies.
- **SEAWEED:** Bio-inductor based on algae rich in amino acids, proteins and Seaweed vitamins, it is a product that can be used at any moment. When the plant is in a stress situation, it activates auto-defence mechanisms and economises energy to the maximum, thus reducing water loss, although thereby limiting stomatic and photosynthesis activities. Using Seaweed reduces stress and the plant does not suffer damage.

- **VERBEL:** is a bioinducer based on amino acids, proteins and vitamins. Verbel is used as a promotor of the vegetative development of the plant; it favours initial fruit development and makes the maturing uniform.
- **REGORTEK:** this is a natural growth regulator of plants. It adjusts the flowering, initial fruit development and crop production. Furthermore, Regortek is a precursor of plant salicylic acid. It therefore activates defence mechanisms on the occasion of infections.

To demonstrate the real effectiveness of these products in the years 2013/2015, various trials were carried out on several vines with different types of cultivation, in different climatic areas, at different heights and under different environmental conditions.

## EXPERIMENTATION N°1: YEAR 2013

**CANTINA RUGGERI, VALDOBBIADENE (TV) VENETO**

**DEFENSE:** CONVENTIONAL;

**SURFACE:** 3000 m<sup>2</sup>;

**VINEYARD:** GLERA;

**TOTAL NUMBER OF TREATMENTS:** 14, OF WHICH ONE CONVENTIONAL.



Before the first treatment of the season, conventional systemic products were used exclusively. From the second treatment on the other hand, **Open Green Incas and Vegetik** products were integrated and, due to the seasonal forecast which was particularly favourable for proliferation of perenospora, it was decided to introduce Ramendo. Low volumes of water were used and, as a consequence, the product doses were calculated according to the maximum concentration per hectare.

Here follows the table of treatments:



DATE	PRECIPITATION	WATER QUANTITY 3000 m <sup>2</sup>	PRODUCTS
1/5/2013	April 130 mm	80 l	Antiperonosporico conventio- nal, 900 ml tiopron
4/5/2013	18 mm	1 hl	<b>800g Ramendo, 400g Incas, 500g Vegetik, 1Kg microthiol</b>
9/5/2013	22 mm	1 hl	<b>800g Ramendo, 400g Incas, 500g Vegetik, 1,5 Kg microthiol</b>
18/5/2013	120 mm	1 hl	<b>800g Ramendo, 400g Incas, 500g Vegetik, 900gr microthiol, dimetomorf</b>
22/5/2013	43 mm	1,5 hl	<b>800g Ramendo, 400g Incas, 500g Vegetik, 900g microthiol, 300 ml prosper</b>
27/5/2013	60 mm	1,5 hl	<b>1 Kg Ramendo, 600g Incas, 800g Vegetik, 900g microthiol</b>
1/6/2013	18 mm	1,5 hl	<b>1 Kg Ramendo, 600g Incas, 800g Vegetik</b>
8/6/2013	35 mm	1,5 hl	<b>1 Kg Ramendo, 600g Incas, 800g Vegetik, 800g microthiol</b>
15/6/2013	8 mm	1,5 hl	<b>600g Incas, 800g Vegetik</b>
23/6/2013	4 mm	1,5 hl	<b>1,4 Kg Ramendo, 800g Vegetik</b>
29/6/2013	19 mm	2 hl	<b>1,2 Kg Ramendo, 800g Vegetik, 75ml arius, 60g actara, Rame</b>
11/7/2013	11 mm	2 hl	<b>2 Kg Ramendo, 1 Kg Verbel</b>
24/7/2013	16 mm	2 hl	<b>2 Kg Ramendo, 1 Kg Verbel, 1,6 Kg tiovit jet</b>
31/7/2013	23 mm	2 hl	<b>2 Kg Ramendo, 1 Kg Verbel</b>

#### RESULTS AND CONSIDERATIONS:

The trial brought excellent results; even if the year turned out to be particularly favourable for development of Peronospora, the trial was not subjected to considerable attacks. The infection index on leaves could be estimated at around 15% while infection of the grape bunches was practically nil; while the control was damaged by 80%.

Worthy of attention are the results on the analysis on grapes.

Here follows the analysis table:



Single P.A. (Elenco p.a. ricercati in allegato)	U.M.	Risultato	L.o.D.	L.o.Q.	MRL	Metodo (S)	@
Clothianidin	mg/Kg	0.005 (tracce)	0.003	0.010		Met Uff. 360	
Mandipropamid	mg/Kg	0.003 (tracce)	0.003	0.010		Met Uff. 360	
Metalaxyl and metalaxy-M	mg/Kg	0.003 (tracce)	0.003	0.010		Met Uff. 359	
Quinoxifen	mg/Kg	0.010	0.003	0.010		Met Uff. 359	
Thiamethoxam	mg/Kg	0.003 (tracce)	0.003	0.010		Met Uff. 360	
Thiamethoxam (sum of thiamethoxan and clothianidin expressed as thiamethoxam)	mg/Kg	0.009 (tracce)	0.003	0.010		Met Uff. 360	
Zoxamide	mg/Kg	0.007 (tracce)	0.003	0.010		Met Uff. 360	

N° pesticidi > 0,01 mg/Kg	0
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## EXPERIMENTATION N°2: YEAR 2014

AZIENDA AGRICOLA LA RASINA, MONTALCINO (SI) TOSCANA

DEFENSE: BIOLOGICAL; SURFACE: 11 HECTARES;

VINEYARD: SANGIOVESE; NUMBER OF TREATMENTS: 15 (2 CONVENTIONAL).

Organic farm, the vineyard is on the hill.



The defensive actions started at around 20 April with two treatments based on Copper hydroxide carried out at a distance of 8 days, after which **3 Kg of Ramendo** was



included and **Incas** coupled with the Copper/hydroxide in minimum doses. The treatments occurred every 7/8 days; after flowering, the **Incas** was eliminated and **Ramendo** and Copper Hydroxide was continued with in minimum doses. The last treatment was carried out on 4 August.

**CONSIDERATIONS:** the vineyard remained healthy for the whole season. No peronospora attack was experienced on the grape bunches. Only after closing up of the bunches did an infection start on the stems which on the other hand did not damage the crop.

## EXPERIMENTATION N°3: YEAR 2015

AZIENDA AGRICOLA LA RASINA, MONTALCINO (SI), TOSCANA

DEFENSE: BIOLOGICAL;

SURFACE: 11 HECTARES; VINEYARD: SANGIOVESE;

TOTAL NUMBER OF TREATMENTS: 11



The defence was initiated on 24 April 2015. Compared with the previous year, 2015 was a very hot year with little rain during the Summer. This did not favour the development of the disease. The company made a total of 11 treatments; separated by 8/10 days. Before flowering, it used INCAS at 3 Kg/ha + sulphur at half dose. During flowering, it used INCAS at 2.5 Kg, RAMENDO at 2.5 Kg, SEAWEED at 0.7 Kg. The algae were used for 4 treatments. Due to the high temperature and poor rainfall, the vines were somewhat stressed SEAWEED which



is a product based on ASCOPHILLUM NODOSUM allowed the plants to react to the water stress. The whole was converted into greater vigour of the plants and in a more uniform maturing of the bunches. After flowering, RAMENDO was used at 3 Kg/ha up to 27 July.

## EXPERIMENTATION N°4: YEAR 2014

MASI AGRICOLA, AZIENDA AGRICOLA " SEREGO ALIGHIERI PODERI DEL BELLO OVILE" ,  
CINIGIANO (GR) TOSCANA

DEFENSE: BIOLOGICAL; SURFACE: 2,5 HECTARES; VINEYARD: CABERNET  
FRANC;

TOTAL NUMBER OF TREATMENTS: 15 (2 CONVENTIONAL).



Organic farm, the vineyard is on a plain.

At this farm, the defence started on 26 April. After the first two treatments based on Copper, treatments with **Incas** at 2 Kg/ha were carried out as well as **Ramendo** at 2 Kg/ha, to which *Ascophillum Nodosum* and Copper were added in minimum doses up to flowering. After flowering, the **Incas** and the Copper were eliminated, and they continued with **Ramendo** at 3 Kg/ha and *Ascophillum Nodosum*.

The last treatment was carried out on 31 July.



**CONSIDERATIONS:** even if the year was very wet, and the vineyard was in a particularly favourable position for the development of Peronospora, the same remained healthy. Only in the veraison phase were some episodes experienced on the stems. No episode was manifest on the bunches.

#### EXPERIMENTATION N°5: YEAR 2014

**AZIENDA AGRICOLA LA CANTINA DI PRESCIANO, PERGINE (AR) TOSCANA**

**DEFENSE: BIOLOGICAL;**

**SURFACE: 20 HECTARES;**

**VINEYARD: SANGIOVESE, MERLOT, CABERNET FRANC, CANAILOLO, CHARDONNAY, PINOT NERO, PINOT GRIGIO;**

**TOTAL NUMBER OF TREATMENTS: 15 (3 CONVENTIONAL).** Organic farm, the vineyard is on level ground.



Defence started at this farm at the end of May. After the first three treatments based on Copper Hydroxide, Ramendo was used as well as Copper Hydroxide at 20% below the minimum dose. Treatments proceeded every 7/8 days until August.



**CONSIDERATIONS:** the vineyards remained clean on the leaf and bunch throughout the season. During the final phase, some episodes experienced on the stems.



## EXPERIMENTATION N°6: YEAR 2015

**AZIENDA AGRICOLA LA CANTINA DI PRESCIANO, PERGINE (AR) TOSCANA**

**DEFENSE: BIOLOGICAL;**

**SURFACE: 20 HECTARES;**

**VINEYARD: SANGIOVESE, MERLOT, CABERNET FRANC, CANAIOLO, CHARDONNAY, PINOT NERO, PINOT GRIGIO;**

**TOTAL NUMBER OF TREATMENTS: 9. Organic farm.**



Treatments started at the end of April in 2015. The trial of 2014 was replicated, which was very positive and satisfactory.

The year 2015 was the opposite of the previous one; poor rain and high temperatures which contained the development and spreading of Peronospora in the vineyard. Nine treatments were carried out using the same methods as in 2014, that is the



first two treatments based on Copper Hydroxide, and the following ones with RAMENDO at 3 Kg + Copper Hydroxide with dosage reduced by 20% of the minimum dose. The defence actions terminated on 25 June.

## EXPERIMENTATION N°7: YEAR 2014

**AZIENDA AGRICOLA FIGLINE VALDARNO (FI) TOSCANA**

**DEFENSE: BIOLOGICAL; SURFACE: 1,5 HECTARES; VINEYARD: SANGIOVESE, MERLOT, CABERNET; TOTAL NUMBER OF TREATMENTS: 15. Organic farm.**



The first part of the defence started at this farm in the conventional manner, using Copper Hydroxide, After flowering, **Ramendo** was inserted with treatments at a distance of 8/10 days, repeated for 10 interventions. The last was carried out in the first week of August.

**CONSIDERATIONS: Ramendo** was used at this farm as a final cover as against Copper Hydroxide. The results were identical with no substantial differences. A healthier aspect of the vines treated with **Ramendo** was noted, compared with those only treated with Copper Hydroxide.



## EXPERIMENTATION N°8: YEAR 2015

**AZIENDA AGRICOLA IL CILIEGIO, MONTERIGGIONI, SIENA**

**CONVENTIONAL DEFENCE - INTEGRATED; SURFACE:** 4 HECTARES; **VINEYARD:** VIOGNIER (white) TREBBIANO TOSCANO (white) MALVASIA DI CANDIA (white) TREBBIANO (white) SANGIOVESE (black); **TOTAL NUMBER OF TREATMENTS:** 15.

Conventional defence began at this farm on 27 April 2015. After the first two treatments based on Flupicolide and Aluminium phosethyl at full doses, the dose was reduced below the minimum advised and RAMENDO was included at 2 Kg/ha and SEAWEED at 0.700 Kg/ha, with treatments every 15 days.



Two treatments followed based on RAMENDO at 3 Kg/ha and SEAWEED at 0.700 Kg/ha, then using RAMENDO exclusively at 3 Kg/ha as final cover. The last treatment was carried out on 28 July 2015.

**CONSIDERATIONS:** Pressure of peronospora was experienced in this area, in line with previous years. Significant infections were not noted but a greater production in that part of the vineyard treated with Open Green products was highlighted, compared with that part exclusively with the conventional methods, as was also a significant difference in the sugar content.

## EXPERIMENTATION N°9 YEAR 2015

**AZIENDA AGRICOLA MONTEROTONDO, GAIOLE IN CHIANTI, SIENA**



**DEFENSE:** BIOLOGICAL;

**SURFACE:** 2 HECTARES;

**VINEYARD:** SAN GIOVESE, CANAILOLO, COLORINO, CILIEGILOLO, MALVASIA NERA, TREBBIANO, MALVASIA AROMATICA, MALVASIA TOSCANA;

**TOTAL NUMBER OF TREATMENTS:** 9.

Conventional defence began at this farm on 30 April 2015. The first treatment was carried out exclusively with INCAS at 3 Kg/ha, after which with RAMENDO at 3 Kg/ha and SEAWEED at 0.700 Kg/ha every 8-10 days. Seaweed was used in nearly all the treatments in that a rescue was made necessary due to drought. The last treatment was carried out on 27 July.



**CONSIDERATIONS:** generally speaking, the products worked very well, both from the point of view of defence, and from the point of view of fertilisation and the general health of the plant. A thickening of the leaf could be noted on the Sangiovese, and a very intense green colour. The canaiolo produced a very uniform maturing compared with other years when it was very heterogeneous. The Seaweed worked very well as an anti-stress agent, above all with the last two treatments carried out as a rescue from the drought, where it limited the damage caused by the heat.

## EXPERIMENTATION N°10 YEAR 2014

**AZIENDA AGRICOLA MIOLATO, SAN GERMANO DEI BERICI (VI) VENETO.**

**DEFENSE:** CONVENTIONAL;

**SURFACE:** 1 HECTARE;

**VINEYARD:** PINOT NERO;

**TOTAL NUMBER OF TREATMENTS:** 6.

Conventional farm, the vineyard is on the hill.

Six treatments overall were carried out on this farm. The Open Green protocol (Ramendo+Incas+Vegetik) was alternated with that usually used at the farm (fluopicolide+fosetyl-AI), every 15 days.



**CONSIDERATIONS:** the vineyard was maintained until harvesting. No episodes of Peronospora were noted, not even on the stems. It being possible to have a panoramic view of the vineyard from above, a general greenness of the vines treated with Open Green products was noted as compared with the rest of the vineyard.

EXPERIMENTATION N°11 YEAR 2014

AZIENDA AGRICOLA CA' DEI FIORI, GUIA DI VALDOBBIADENE (TV) VENETO

DEFENSE: CONVENTIONAL; SURFACE: 1 HECTARE; VINEYARD: GLERA; TOTAL NUMBER OF TREATMENTS: 12. Conventional farm, the vineyard is on a hill.

This test was carried out on the prosecco hills of the DOCG Conegliano Valdobbiadene. The particular formation of the territory does not allow for entering the vineyards with a tractor, therefore, the treatments at this farm were partly carried out by hand and partly with a lance; this last detracts from the uniformity of distribution of product. Defence started in the middle of April with a conventional coverage, after which it continued until flowering with



**Ramendo, Incas, Vegetik**. After flowering, cover was maintained with **Ramendo and Vegetik** according to the calendar and to this was added Dimethomorph for two alternate treatments. The final covering on the other hand was carried out with **Ramendo**, only until 20 August.



**CONSIDERATIONS:** at the end of the season, the plants looked perfectly healthy, without any sign of disease. A considerations should be made regarding the dosing. In the month of July, much above average rainfalls were experienced. This did not allow for following the treatment calendar because the daily storms exceeded 30 mm of rainfall. This required treatments closer to 4/5 days several times. The use of calibrated doses for treatments every 7/8 days for shorter spans of time caused the "accumulation" of products on the leaves which then resulted in episodes of non-serious toxicity, but which could have been avoided by simply reducing the doses.

## EXPERIMENTATION N°12 YEAR 2015

**AZIENDA AGRICOLA CA' DEI FIORI, GUIA DI VALDOBBIADENE (TV) VENETO**

**DEFENSE:** CONVENTIONAL; **SURFACE:** 2 HECTARES; **VINEYARD:** GLERA; **TOTAL NUMBER OF TREATMENTS:** 10.

In 2015 the trial carried out in 2014 was repeated. The climatic conditions of 2015 were the opposite of the previous year and as a consequence the peronospora pressure was much reduced. The products used were the same as the previous year with



in

the insertion of a new product: REGORTEK. The treatments started at the end of April with 4 treatments on Incas at 3 Kg/ha + Vegetik at 2 Kg/ha. From flowering, REGORTEK was added at 2.5 Kg/ha and the Vegetik was reduced by 30%. After flowering, up to the closing up to the closing up of the bunches, 3 treatments were made with Ramendo at 3 Kg/ha, VEGETIK at 1.5 Kg/ha and REGORTEK at 2.5 Kg/ha. For the last interventions, only RAMENDO at 3 Kg/ha was used.

**CONSIDERATIONS:** at the end of the season, the vineyard was without infections. The use of Regortek allowed for a further reduction in Potassium Phosphate, reducing the percentage of chemical residues in the grapes.

## EXPERIMENTATION N°13 YEAR 2014

**AZIENDA AGRICOLA MOSCHETTA EROS, PIEVE DI' SOLIGO (TV) VENETO**

**DEFENSE:** BIOLOGICAL; **SURFACE:** 1 HECTARE; **VINEYARD:** GLERA; **TOTAL NUMBER OF TREATMENTS:** 22. The vineyard is on a flat plain.



After the first two covering treatments with Copper, which started on 6 April, **Ramendo**, **Incas and Seaweed** were used every 7/8 days. Initially, **Ramendo** was used at 4/5 Kg/ha; this resulted in an arrest in the growth of the plant. The plants responded very well to the use of **Seaweed and Incas**; **use of Ramendo** was restored post flowering, along with Copper Hydroxide. The last treatment was carried out on 8 August.



**CONSIDERATIONS:** at the end of the season, the plants were healthy; the disease, mostly inexistent, was seen on the leaf and never on the bunches.

## EXPERIMENTATION N°14

AZIENDA AGRICOLA N° 11, L'AQUILA, ABRUZZO

DEFENSE: BIOLOGICAL; SURFACE: 20 HA;



**VINEYARD:** MONTEPULCIANO, TREBBIANO. The vineyard is in a hilly area.

From the vegetative recovery, this farm adopted a defence based on the Bordeaux mixture and parahydroxy-sulphate which turned out to be of limited effectiveness in combating the disease. At the end of June, in the grape bunch pre-closure phase, a test was carried out with **Ramendo** at 4 Kg/ha and tribase copper instead of the defence programmed with Bordeaux mixture and copper oligal.



TREATMENT WITH RAMENDO WAS CARRIED OUT IN THE UPPER PART OF THE VINEYARD



**CONSIDERATIONS:** three treatments were carried out by calendar and by the second one, the difference in health of the plant was already evident on that part treated with **Ramendo**. In the vineyard treated with **Ramendo**, a more uniform maturing of the grape seed was noted and, even if apparently less bunches were noted in the vineyard treated with **Ramendo** than in the vineyard with pre-established products, the final weight was the same.

## EXPERIMENTATION N°15 YEAR 2015

**AZIENDA AGRICOLA DI ROSA GIOACCHINO, PALMA DI MONTECHIARI, AGRIGENTO**

**DEFENSE:** CONVENTIONAL; **SURFACE:** 4 HA; **VINEYARD:** NERO D'AVOLA E INSOLIA.

The vineyard, planted as head-trained bush vines, on land of average consistency, chalky loam.

Foliar treatment started on 10 May at intervals of 10 days.

The products used were LUXURY at 2.5 Kg/ha and BIOSPRINT at 2.5 Kg/ha (immediately after the end of flowering).



**CONSIDERATIONS:** greater vigour was noted in the plant, evident leaf shine and a greater thickness in the leaf cuticle. The bunches were elongated and uniform, and a better resistance to thermal peaks and powdery mildew. Treatment with the classic powdery mildew treatments was applied at intervals, with the aim of reducing the chemical residues.

## EXPERIMENTATION N°16 YEAR 2015

**AZIENDA AGRICOLA POLIZZI, MAZZARRONE, CATANIA**

**DEFENSE:** CONVENTIONAL; **SURFACE:** 4 HA; **VINEYARD:** UVA DA TAVOLA VITTORIA E ITALIA.

Cultivationn by "tendone" (overhead on arbours or pergolas), under canopies.

Foliar feeding was started on 10 May with VEGE-TIK at 2.5 Kg/ha, and INCAS at 2.5 Kg/ha from the phase of grape enlargement,

Incas was substituted with RAMENDO at 2.5 Kg/ha and VEGETIK. Still during the enlargement

phase, LUXURY at 2.5 Kg/ha and BIOSPRINT at 2.5 Kg/ha were also used.



**CONSIDERATIONS:** Maximum resistance to peronospora was noted, and a greener colour to the leaf, with contours well delineated and larger. Thanks to the use of Luxury and Biosprint, a greater lengthening of the bunch was noted with much more consistent grapes. Furthermore, REGORTEK at 2,5 Kg/ha was used coupled with Karathane and Myclobutanil, reduced by 30% of the dose usually used.

Excellent results were obtained from the plant health point of view, as well as for production; an increase of 20% of bunches was recorded.



### EXPERIMENTATION N°17 YEAR 2015

**AZIENDA AGRICOLA CHESSARI GIORGIO, MAZZARRONE, CATANIA**

**DEFENSE:** CONVENTIONAL; **SURFACE:** 1 HA; **VINEYARD:** UVA DA TAVOLA ITALIA.

Cultivation by "tendone" (overhead on arbours or pergolas), under canopies.

The first treatments were carried out on 10 May with VEGETIK at 2.5 Kg/ha and INCAS at 2.5 Kg/ha. From flowering, INCAS was substituted with RAMENDO at 2.5 Kg/ha LUXURY at 2.5 Kg/ha was also used, as well as REGORTEK at 2.5 Kg/ha in association with fungicides reduced by 30%.



**CONSIDERATIONS:** the results noted are similar to those of the Polizzi farm: leaf colouring more intense, high resistance to peronospora, minor use of antioxidant products, increase of 20% in production of bunches, more developed and with more consistent grapes.

### EXPERIMENTATION N°18 YEAR 2015

**AZIENDA AGRICOLA DI GROPPOLI SALVATORE, BRINDISI, PUGLIA**

**DEFENSE:** CONVENTIONAL; **SURFACE:** 1 HA; **VINEYARD:** UVA DA TAVOLA VITTORIA.

Cultivation by "tendone" (overhead on arbours or pergolas), under canopies.



In this trial, Regortek was tested along with anti-peronospora fungicides. Three treatments were carried out: at 15 days from flowering, Regortek was used at 2.5 Kg/ha; at the start of flowering, Regortek at 2.5 Kg/ha and, on post initial fruit development, another treatment at 2,5 Kg/ha.

**CONSIDERATIONS:** the results noted were as follows: better initial fruit development, minor millerandage and above all a better reaction of the plant was noted against temperature variations.

# Tests of field vine



## CONCLUSIONS . . .



These days, conventional cultivation of vineyards mostly uses a great deal of pesticides. Vines are one of the crops for which the most considerable part of chemical substances by contact are used, Tiofthallimmini, Dithiocarbamate, Dicarboximide, Cyano-derivates, Organophosphates and various systems during the whole vegetative cycle and other post-harvesting chemical products. At the same time, the wish of the end consumer and, consequently of the viticulturist is of obtaining an end product where: "the wine" tends towards zero chemical residues. This requirement, or need, is not only becoming a moral imperative with regard to the consumer, but also a requirement imposed by the whole supply line to allow for marketing in Italy and, above all, abroad; a quality product devoid of chemical residues. Even the more attentive viticulturist and the most professional wine merchants are committed to strongly reducing that part of chemical substances used for seeking alternative products or by integration with conventional ones. Those which keep a high level of defence against the most common vine pathologies, while at the same time seeking to obtain that result that these days all professionals of the sector tend to achieve, that is, a product with zero chemical residue.



A fully organic defence exists, and it has persuaded many viticulturists to practice it over these last years, with excellent results with regard to chemical residues, but with production of 30% less than that attained with conventional defences. For this reason, we consider that the integration and focused use new foliar fertilisers with an action of stimulating natural defences of the plant, already enjoy, now and even more so in the future, a continuously increasing use as has been demonstrated. They represent the only real and firm possibility of maintaining production, and the organoleptic characteristics of the wine unaltered.

At the same time, they offer that inescapable possibility of obtaining a product tending towards a zero chemical residual content, as demonstrated by the trials carried out.

**In this context and at this time, Open Green**, suggests that, thanks to its research and its continuous contacts with Universities and specialised institutes in Italy and abroad, it has the best multi-function products for an integrated defence of vines, aimed at obtaining grape production in line with demanding market requirements and always more aimed at a quality wine.



# Tests of field vine

Advanced integration viticulture  
by Open Green



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