

Protocol concept

Fratelli Serio & Battista Borgogno
Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

VEGETATION PROCESSING

- to enhance and not alter the indigenous characteristics of the soil of fertility and mineralogical and biological constitution
- cultivate the vine by following its natural physiology.

THE BIODIVERSITY PROJECT

- the planting of trees and / or hedges which are particularly attractive to insects and birds
- installation of artificial bird nests

TREATMENTS

- Prevention is essential for us to reduce treatments and therefore reduce the environmental impact
- PROTOCOL DEFINED the goal of minimum residuality on grapes.

RAINWATER COLLECTION

- to cover an area of about 8 hectares, about 500-600 hl of water / year are used for the treatments
- We are able to reduce, if not eliminate, the use of rainwater

**for the conservation of biological
balances and the environment**





Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

INTRODUCTION

The vines grown with the Guyot system are in an unnatural management condition compared to their own spontaneous vegetative model. This form of management makes it possible to regulate production potential in the best possible way. However, the vigor of growth of the vegetation is enhanced by altering the phenological times. Therefore, it is essential to wait as long as possible at the two points below.

With this operational protocol, two fundamental protection objectives are set:

1. to enhance and not alter the indigenous characteristics of the fertility soil and mineralogical and biological constitution
2. to cultivate the vine according to its natural physiology.

The result that is pursued is to obtain grapes
with the highest levels of quality and
environmental characterization every year.

Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

THE VEGETATIONAL METHOD

OPERATIONAL PROTOCOL - SUMMARY

it does not bring anything overwhelming to the ordinary and correct management of the vineyard. However, many observations and experiences gained in the now long working path have highlighted how some precautions, the result of analysis in conditions of spontaneity, can highlight even substantial differences in the final results. (1) Managing the vineyard with the consideration that cultivation practices will affect the environment for several decades: taking care of the place and the land is therefore one of its objectives. (2) Managing the vineyard according to the vegetational rules (physiological and phenological) of the vine: it gives the products greater characterization linked to environmental factors and greater longevity of the plant.

Edoardo Monticelli



Dottore Agronomo EDOARDO MONTICELLI

Consulente in Viticoltura

Mail: e.monticelli@viticoltura.com

Sito Internet: www.viticoltura.com

Facebook:

www.facebook.com/Monticelliviticoltura



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

AGRONOMIC MANAGEMENT

_Total grassing of the entire surface, spontaneously

_Integrations to the ground only in case of rescue needs such as:

- overproduction in the previous year
- absence of production in the previous year
- substantial damage from hail
- environmental stress
- vegetative insufficiency throughout the entire seasonal period
- photosynthetic insufficiency in the entire seasonal period.

(Please note: each intervention is to be considered "non-ordinary" and therefore must be carefully studied with regard to the actual conditions of the vineyard and through an analytical examination of the soil)



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

Integration of soil improvers

The formation of organic substance in the soil is the sole consequence of the ordinary mowing of the surface turf and the shredding of the vine shoots.

(Please note: each type of soil has its own fertility as an aptitude for producing biomass. Following this, its fauna and microbial flora and the various relationships that derive from it become an integral part of the soil. It is therefore advisable to take advantage the specific indigenous properties of the soil without altering them, modifying the quantity and type of organic substance spontaneously produced)

Foliage fertilizations

If there are symptoms of specific nutritional anomalies recurring in the vintages, it could mean an irregularity at the level of the ground, which, however, is difficult and uncertain to correct. Sometimes the negative effects are greater than the expected results. It is therefore more advantageous to operate through foliar nutrition which, in any case, must take place following careful technical evaluations.

Tilling of the land

The tillage is allowed if superficial in the sub-row and if there is a deterioration of the vigor linked to anomalous conditions of the soil, in alternate rows. Sub-row processing is a strategy for herb containment. The processing of the inter-row surface is, if possible, to be avoided as it significantly alters the transformation of the organic substance and the microbial population.



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

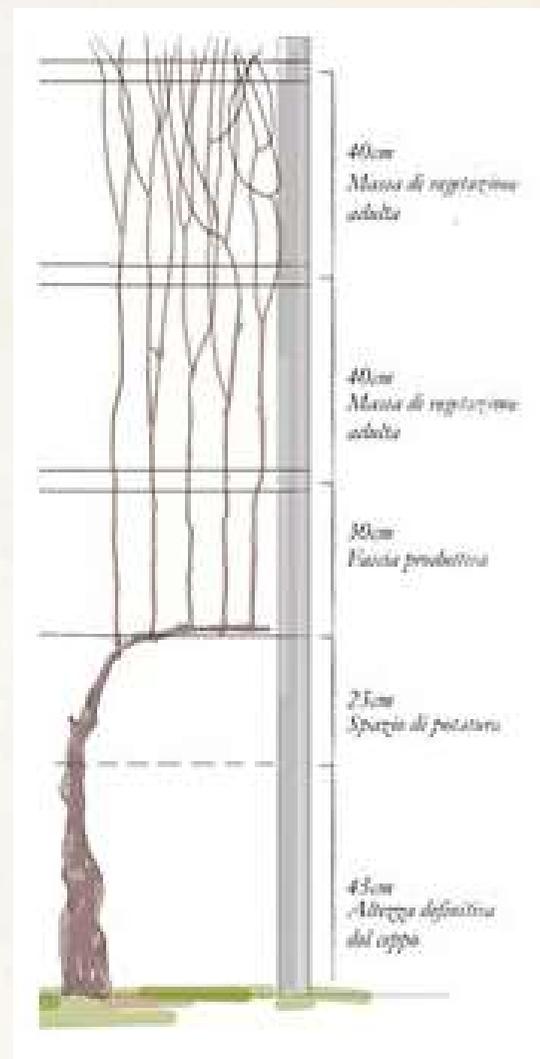
www.borgognoseriobattista.it - info@borgognoseriobattista.it

ROW STRUCTURE SETTING

Please note: the aim is to distribute the three parts which differ in their physiology for all fruiting shoots. The fruiting basal area, the intermediate area of vegetative mass and the apical area of greater synthesis of growth hormones)

Low Guyot training

- Minimum height of the permanent log 30 cm, maximum 45 cm
- Branching area for ordinary winter pruning 25 cm (not less than 4 nodes)
- Maximum height of the production band 30 cm above the fruiting garment
- Height 90/120 cm of development of the vegetative mass, in relation to the vine and the length of the internodes.





Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

Preparation for the new vegetative-productive season

Winter pruning

Winter pruning can be divided into ordinary interventions for the following year and extraordinary ones for the restoration or improvement of the stumps.

1. Preparation of the fruiting head and spur: in the Guyot training system the pruner will select the fruiting head on the individual plants as a branch of the year of good conformation and production reliability, with a load of buds proportionate to the vigor of the plant. The choice of the spur will be a branch located downstream of the fruiting head, within the same hierarchical structure of the branch, therefore suitably shortened to 3 buds.
2. The stumps will be cleaned of the dead parts deriving from the previous pruning, up to the grafting point.

Shredding and shredding

The detachment of the vine shoots from the row after winter pruning will be done with care so as not to damage the buds of the remaining branches. The vine shoots are cut on site. Their transformation will favor the microbiology of the soil surface and the maintenance of the C / N balance.

Binding of fruit vine shoot

The fruit head must be placed horizontally on the base wire, tangent to it and solidly anchored. The bending must take place without the formation of sharp edges and injuries.

This position will allow the development in equivalent height between the shoots of the vegetative-productive belt.



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

Checking and spring defoliation

The operation involves:

- Elimination of double shoots on the fruiting head
- Selection of the new vegetation of the spur
- Elimination of the first two basal leaves of each fruiting shoot, except for those that appear the weakest.

Cleaning the logs

The elimination of the new shoots that originate on the stumps will take place when they still have a herbaceous consistency, but at least 20 cm of development has been achieved in order not to stress the new regrowth. With this intervention, any re-growth from the depth of the soil will also be eliminated, removing if present the wood residues from which they originate



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

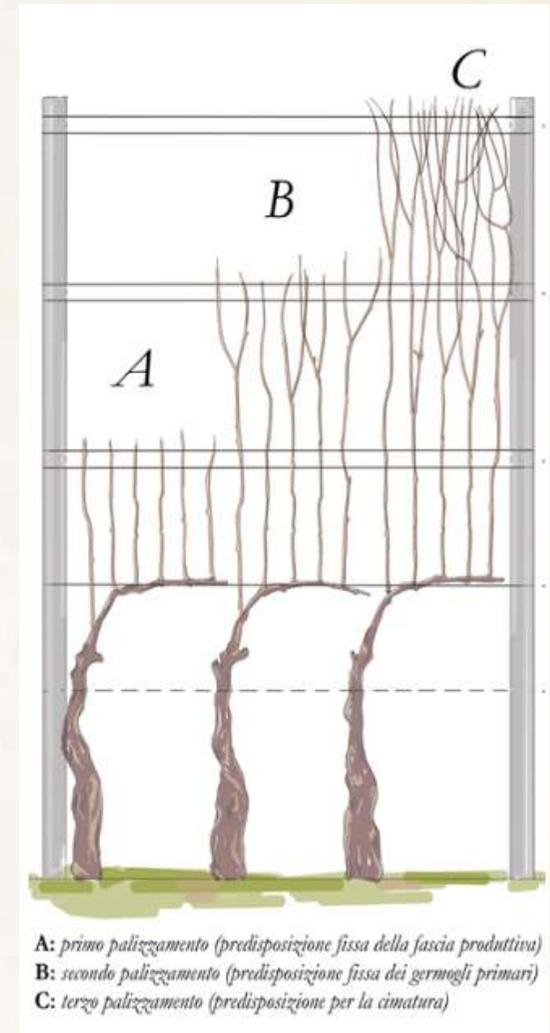
www.borgognoseriobattista.it - info@borgognoseriobattista.it

SPRING-SUMMER VEGETATION MANAGEMENT

Palisade

(NB: with this intervention we mean the solid and accurate fixing of the fruiting shoots in a vertical position on the espalier, supporting them progressively during their development. The female shoots that develop during the second phase of budding will thus be able to extend towards the outside of the row, to the right and to the left. Furthermore, the solidity of the fixing will guarantee the good distribution of the bunches and the least number of clusters.)

The tying of the shoots in the first phase of growth is essential for the correct formation of the espalier. The fixing can be done individually, with double iron wires or in this phase with the cords that can then be removed, releasing better the bunches once the shoots obtained the top of the row and are well anchored. It is important that the growth of the fruiting shoots is vertical and is thus maintained. Their growth will thus be followed with two to three fixing operations. The first when they have reached a length of 30-40 cm, the second when they have reached 70-90 cm and possibly a third accommodation in the case of vineyards of particular height and vigor.





Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

LATERAL AND APICAL GREEN PRUNING

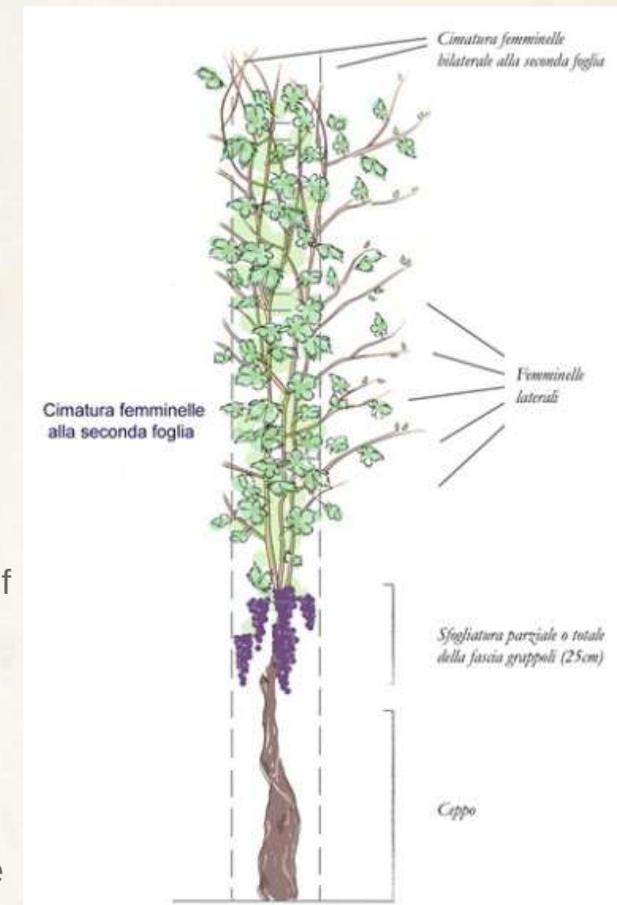
Branching / topping

The term “sfemminellatura” is improper, as it is not foreseen in the belt of greatest vegetative development. Once the females have developed and emerging laterally from the espalier, these will be topped laterally to the second node, so that each of them contributes with two adult leaves to the leaf mass. Since the growth of the females is very close to the successive nodes in the height of the row, the leaves will be adult and contemporary at different heights in a short time.

Note: the shape of the row imposed by the mechanical trimming machine will be rectangular at this time, in order to favor the contemporary development of the vegetation, while in the summer the shape will be trapezoidal).

Green lateral and summer apical pruning (trimming / topping)

Differently between the vintages, there may be a more or less protracted period of herbaceous growth. From the month of July, the greater density of foliage is formed in the upper part and, in order to favor the completion of the herbaceous phase, the topping shape will be trapezoidal in this phase.





Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

MANAGEMENT OF THE PRODUCTION BAND

Cluster band cleaning

The clusters must always be well ventilated, all exposed in the same microclimatic conditions with limited solar radiation in terms of intensity or duration. (Note: an example is taken from the condition of spontaneity, when the clusters hang below a vegetation supported by the branches of other trees. The clusters are all in the same conditions, detached from the mass of vegetation and with partial irradiation. fundamental importance for the conservation of the organoleptic characteristics of the fruits and to avoid their heating). The thinning of the vegetation in the cluster belt must take place with these purposes, in relation to the characteristics of the vineyard (slope, exposure, density of the vegetative mass). If the vegetation is full, having cured the shapes with the topping, the clusters will already be partially protected.

Arrangement and thinning of bunches in the herbaceous phase.

After fruit set and the first herbaceous growth, the clusters must fall and free themselves from the vegetation. They will be arranged downwards, free from the gatherings of vegetation and any tangles between them. As far as possible they will be evenly arranged as low as possible on the backrest. To this end, a first selective thinning will also be carried out:

- high bunches beyond the predetermined production range
- bunches not well formed
- double or triple clusters on the same shoot.



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

Defoliation of bunches

The bunch must grow not too covered by vegetation. Depending on the characteristics of the vineyard, the defoliation can be performed in the following ways:

- total in the first 25 cm above the fruit head
- of bilateral thinning on the two walls of the row
- of intensive thinning on the part facing east or north.

Pre-harvest bunch thinning

The thinning of the bunches in pre-harvest will be selective for the best quality. In particular, we will consider:

- the quantity of product expected and required by the Company
- the health of grapes (cryptogams, burns)
- the perfect conformation and location of the bunches
- the regularity of distribution horizontally.

In the picture

Clusters of homogeneous formation,
inserted in the predetermined production range
and with adult and consistent vegetation as shelter.



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

GRAPE HARVEST

The grape harvesting site is subject to the organization of the Company. However, the general precautions to be followed are the following:

- detachment of the bunches trying to keep them intact
- as little removal as possible of the vegetation in the belt

If necessary, manual cleaning of the grapes from damaged parts (rot, burns, hail).



Dottore Agronomo EDOARDO MONTICELLI

Consulente in Viticoltura

Mail: e.monticelli@viticoltura.com

Sito Internet: www.viticoltura.com

Facebook:

www.facebook.com/Monticelliviticoltura

Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

THE PROTECTION OF BIODIVERSITY IN THE VINEYARD

The vineyard by its nature is a very poor biodiversity environment. Biodiversity is the natural element predisposed for the conservation of biological equilibrium and for the protection of the environment.

To this end, a targeted project has been prepared for increasing biodiversity among the vineyards which involves the planting of trees and / or hedges which are particularly attractive to insects and birds in the different seasons, both for their nutrition and for their shelter or reproduction.

In addition, artificial bird nests will be installed, so that they can nest more in the vineyard. When there is the brood, the flights between the nest and the natural environments are numerous and continuous. The small allies thus become importers of micro-arthropods useful for the vineyard.



Dottore Agronomo EDOARDO MONTICELLI

Consulente in Viticoltura

Mail: e.monticelli@viticoltura.com

Sito Internet: www.viticoltura.com

Facebook:

www.facebook.com/Monticelliviticoltura



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

THE PROJECT

started in 2021, it has already been built in the new vineyard in Diano d'Alba di Langhe Nascetta. It will then continue in Autumn, as an ideal period for planting, in the vineyards of Cannubi and away on the company surface, with a careful study of the species and types of shrubs and plants based on the needs and location of the vineyards.



Images by way of example, not corresponding to the vineyard indicated but they give an idea of how it will develop



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

THE COLLECTION OF RAINWATER

The collection of rainwater for phytosanitary defense

Water is one of the fundamental elements for life.

We believe it is essential to minimize waste.

For this reason we take advantage of the large roof covering area of our cellar.

Rainwater is collected in the gutters and made to flow into special tanks so that it can be used for treatments.

In this way, with careful control of it, we reduce or even eliminate the use of drinking water for treatments. (based on vintage)

Our company has an area of about 8 hectares in total

From an average estimate, a volume of 500-600 hl of water / year (50,000 -60,000 lt) will be used for phytosanitary treatments

With the collection of rainwater our company
avoids the waste of about 50,000-60,000 liters of
drinking water every year

Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

PHYTOSANITARY DEFENSE

The defense against parasites consists of two joint practices:

- Agronomic prevention through cultivation measures
- Biological phytosanitary defense implemented through the DEFINED PROTOCOL

The application of pesticides, even if of natural origin, is conceived by dedicating the utmost attention to them in the spring when the fruit is not yet present, in order to be able to reduce until the subsequent interventions cease. In this way, the objective of minimum residuality on the grapes is pursued.

The application of the treatments is aimed at seasonal climatic conditions, more or less favorable to parasites, in order to reduce the amount of pesticides in the vineyard as much as possible.



Dottore Agronomo EDOARDO MONTICELLI

Consulente in Viticoltura

Mail: e.monticelli@viticoltura.com

Sito Internet: www.viticoltura.com

Facebook:

www.facebook.com/Monticelliviticoltura



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

NOTE - "DEFINED PROTOCOL" means the commitment to adopt substances of natural origin in health defense, as provided for in the "biological phytosanitary defense".

However, it should be emphasized that the vineyard environment is in itself not relevant to the rules of spontaneous biodiversity (effective and the only natural prevention from parasite attacks).

It may therefore happen that some parasites, particularly favored by the climatic trend of the year, occasionally show an exceptional invasive potential.

When this happens, the present problem arises about the greater environmental impact:

1. increase the number of distributions in use with evident accumulation harmful to the environment
2. to derogate in a totally exceptional measure on active principles capable of interrupting the spread of pathogens in order to reduce phytosanitary interventions in such non-ordinary conditions.

This evaluation is reserved in individual circumstances, as these are not usual and with the aim of constantly evaluating the lower environmental impact operated.)

The game of prevention is fundamental for us to
reduce treatments and therefore reduce the
environmental impact.



Fratelli Serio & Battista Borgogno

Dal 1897, vigneti e cantina in Cannubi

Via Crosia 12, Tenuta Cannubi, Barolo - Italy

www.borgognoseriobattista.it - info@borgognoseriobattista.it

PARASITE PREVENTION TREATMENTS

The vineyard is an environment particularly predisposed to the action of certain specific parasites of the vine and strongly conditioned by the climate.

Therefore, not knowing its future evolution, we work mostly in advance, adopting technical-cultural measures in order to reduce the susceptibility of the vineyard itself to the action of parasites.

1. The repeated mowing of the grass in order to allow ventilation and the lower presence of humidity in the band of the bunches.
2. The care of the vegetation aimed at obtaining the adult condition of all leaves in the shortest time. The latter, considerably less exposed to diseases than those in development.
3. The careful reordering of vertical vegetation in order to compose a homogeneous density of vegetation along the entire length of the row (basic is that there are no more favorable areas for parasites which would thus become places of proliferation and inoculation).
4. Maintain the plants with the greatest possible vegetative balance, not practicing any practice of forcing the vegetation.