

DATA SHEET

MAMULL® (WP) BIOLOGICAL FUNGICIDE

Mamull® is a biological fungicide composed of wound-colonizing fungi, in a wettable powder formulation, with action on phytopathogens.

The strains of *Bionectria ochroleuca*, *Trichoderma gamsii* and *Hypocrea virens* used have fungicidal action, *Bionectria ochroleuca* and *Hypocrea virens* have a competition, inhibition and parasitism effect, while *Trichoderma gamsii* it has a competition and microparasitism effect; It has wide applicability on plants, has healing action and has a healing effect on cankers caused by phytopathogenic fungi, without requiring exhaustive physical cleaning. The Mamull® formulation is composed of mycelium and conidia of biocontrol fungi.

All strains of **MAMULL®** are free-living, non-GMO mesophilic organisms with no risk to humans, pets, beneficial organisms, and the environment.

SAG CHILE Registry N°2.964-O
Authorized by SAG for Use in National Organic Agriculture.

COMPOSITION

<i>Bionectria ochroleuca</i> strain Mitique*	1 % p/p (10 g/kg)
<i>Trichoderma gamsii</i> strain Volqui**	1 % p/p (10 g/kg)
<i>Hypocrea virens</i> strain Nire***	1 % p/p (10 g/kg)
Coformulants q.s.s.	100% p/p (1kg)

INSTRUCTIONS FOR USE

Aerial application: For aerial applications, use water volume of 30 to 60 L/ha. Carry out applications with wind speed less than 10 km/hour. Consider the same control objectives, times and number of applications indicated for terrestrial application, adjusting the concentrations according to the doses indicated in the following table:

Table of instructions for use for aerial applications

CROP	DOSE
Pomaceae (Apple, Pear, Quince)	800 - 1000 g/ha
Kiwi	1000 g/ha
Carozos (Cherry, Plum, Peach, Nectarine, Damask)	800 - 1000 g/ha
Nut fruits (Walnut, Pistachio, European Hazelnut, Almond)	1000 g/ha
Vegetables (Lettuce, Spinach, Chard, Celery, Broccoli, Onion, Coriander, Endive, Melon, Rapeseed, Caraway, Cabbage, Cauliflower, Lettuce, Peas); Ornamentals (Carnation, Chrysanthemum, Gladiolus, Peony)	500 g/ha
Grapevine	800 g/ha parron 500 g/ha sprouting 300 g/ha pitoned cord
Palt - Citrus fruits	1000 g/ha
Berries (Blueberries, Raspberry, Cranberries , Maqui, Son, Murtilla, Frutilla)	300-5 g/ha
Grenade	1000 g/ha

Table of instructions for use for land applications applications

CROP	DISEASE/ PATHOGENE	DOSE	AGES OF APPLICATION
Pomaceous (Apple tree, Pear tree, Quince)	Rough canker (<i>Diplodia serieta</i>); Silver (<i>Chondrostereum purpureum</i>); Canker European of the apple tree (<i>Nectria galligena</i>)	100g /hl	Apply after pruning cuts or on wounds. In treatments healing, ensure access of the product to the canker Wetting between 500-1000 l, according to size of plant.
	Eye of ox in apple tree (<i>Neofabraea tramp</i>)		Apply 80 and 65 days before of harvest covering completely floor and foliage. Wetting suggested of 1500 l, according to size of plant.
	Inoculum: Scabies of the Apple tree (<i>Venturia inaequalis</i>); Pear scab (<i>Venturia pyrina</i>)		Apply about leaf litter from drop of leaves until bloom, for he control of inocula. Wetting suggested of 500 L/ ha , according to coverage of leaves in floor.
Kiwi	Arm dieback (<i>Neofusicoccum parvum</i>); Silver (<i>Chondrostereum purpureum</i>)	100g /hl	Apply after of done the cuts of pruning l in presence of wounds. Suggested wetting of 1000 L, depending on plant size.
	Inoculum: Death regressive of arms (<i>Neofusicoccum parvum</i>)		Apply from fallen leaves, on pruning remains, to control inocula. Wetting suggested of 800 L/ ha , according to coverage of remains of pruning on ground.
Carazos (cherry tree, plum tree, peach tree, Nectarine, Damascus)	Silver (<i>Chondostereum purpureum</i>); Chancre (<i>Cytospora chrysosperma</i>)	100g /hl	Apply after pruning cuts or on wounds. In curative treatments ensure access of the product to the canker, removing presence of eraser. Wetting between 500-1000 l, according to size plant
	Inoculum: Decay black of the cherry tree (<i>Alternaria alternata</i>); Gray rot (<i>Botrytis cinerea</i>)		Apply about leaf litter, from drop of leaves until bloom for he control of inocula. Wetting suggested of 400 L/ ha , according to coverage of leaves in floor.
fruit trees of nut (Walnut, Pistachio, European hazel, Almond)	Death regressive in walnuts (<i>Diplodia mutilates</i>); Toning and canker of stems and twigs (<i>Diplody Coryli</i>)	100g /hl	Apply after of done the cuts of pruning l in presence of wounds. Suggested wetting of 1000 L, depending on plant size.
Vegetables (Lettuce, Spinach, Chard, Celery,			

Broccoli, Onion, Coriander, Endive, Melon, Raps, Wonderful, Cabbage, Cauliflower, Bean, Pea); Ornamental (Carnation, Chrysanthemum, Gladiolus, Peony)	Decay soft (<i>Sclerotinia sclerotiorum</i>)	100g /hl	Apply on stubble, post-planting and 7 days post-planting to inoculum control. Suggested wetting of 300 L/ha depending on the size of plant.
Vine	Wood diseases (<i>Neofusicoccum australe</i> ; <i>Phaeomoniella chlamydospora</i> ; <i>Diplody serieta</i>)	100g /hl	Apply after pruning cuts or on wounds. In treatments healing, ensure access of the product to the canker (Wetting between 500 - 1000 l, according to size of plant water system of driving).
	Inoculus: Gray rot (<i>Botrytis cinerea</i>); Disease de the wood (<i>Diplodia seriata</i>)		Apply about leaf litter and remains of pruning, for he control of inocula. Wetting suggested of 400 - 800 L/ ha , according to coverage of leaves in floor.
Avocado - Citrus	Death regressive (<i>Lasiodiplody theobromae</i>)	100g /hl	Apply after of done the cuts of pruning l in presence of wounds. Suggested wetting of 1000 L, depending on plant size.
	Inoculum: Anthracnose (<i>Colletotrichum gloeosporoids</i>); Rotting peduncular (<i>Botryosphaeria dothidea</i>)		Apply about leaf litter from bloom, maturation of fruits, pre-harvest and post-harvest , for he control of inocula. Wetting suggested of 800 L/ ha , according to coverage of leaves in floor.
Berries (Blueberries, Raspberry, Cranberries , Maqui, Blackberry, Murtilla, Strawberry)	Plated (<i>Chondostereus purple</i>) ; Cancer of the stem (<i>Fusicoccum small</i>);	100 g/hl	Apply after of done the cuts of pruning l in presence of wounds. Wetting between 200 - 1000 L, depending on plant size.
	Inoculum: Decay grey (<i>Botrytis cinerea</i>)		Apply about leaf litter from drop of leaves, for he control of inocula. Suggested wetting of 400 L/ha.
Pomegranate	Diseases of the wood (<i>Diplody serieta</i>)	100g /hl	Apply after of done the cuts of pruning l in presence of wounds. Suggested wetting of 1000 L, depending on plant size.



There are no limitations on the number of applications per season. Do not apply during rainfall.

Preparation of the mixture: Dissolve the required amount of **Mamull®** in a bucket of water, shaking vigorously, then pour into the application equipment that has previously been filled halfway; shake and finish filling. Keep with constant agitation. The mixture should be used within a maximum of 12 hours in order to ensure its effectiveness.

Incompatibility: Incompatibility for joint applications with cupric compounds and antibiotics. Do not mix **Mamull®** with other pesticides without first performing a compatibility test. Do not apply with calcium polysulfide. Check with the manufacturer's compatibility list.

Phytotoxicity: There is no phytotoxicity in recommended crops.

Grace Period: 0 days.

Re-entry Time to Treated Area: Re-entry is possible 2 hours after application or once the deposit has dried on the foliage in the case of humans. In animals, it does not apply, as these crops are not for animal consumption.

Storage: **MAMULL®** must be stored in its original sealed container, in a cool and dry environment, not exceeding 25°C, well ventilated. Maximum storage time: 12 months.

Use in organic and biodynamic agriculture:

**Product suitable for use in Organic Farming in accordance with: NOP Regulation and JAS Regulation.
ECOCERT F-32600 control.**



**Product suitable for use in organic agriculture in accordance with the KIWA BCS regulation
Product suitable for use in Biodynamic Agriculture in accordance with DEMETER International regulation
Authorized by SAG for Use in National Organic Agriculture.**

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