

## VINE

FRAMEWORK PROGRAM FOR MINE	RAL™ USE
ON VINE	

Vine, (also suitable for Kiwi)

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Development phase	Measure	Mineral™	Solution
soil preparation for planting seedlings or at the beginning of the vegetation in biennial and perennial grape vine plants	Basic fertilization or additional fertilization with organic or mineral fertilizers (NPK)	/	/
immediately after planting seedlings	Watering the soil if possible once	MINERAL™ GREEN	<b>4%</b>
or at the beginning of vegetation (sprouting)	for young plants again at the beginning of dry period, if possible		( 40 ml / 1   water ) ( 4 dl / 10   water ) ( 4   / 100   water )
	- brings nutrients and water to the soil and root system - improves development and strength of roots -reduces the influence of the temperature shock, wind, frost etc., distinctively in young plants		

	Spraying - prevention	MINERAL™ YELLOW	4 %
after 3 leaves are visible then before, during and after flowering to harvesting grapes	Repeat regularly once in 7 - 8 days - increases the resistance of plants against diseases - foliar feeding (through leaves) - improves fertilization, quality of fruits and durability		( 40 ml / 1 l water ) ( 4 dl / 10 l water ) ( 4 l / 100 l water )
after 3 leaves are visible then before, during and after flowering to harvesting grapes	Spraying - prevention   Repeat regularly once in 7 -8 days   Always a day after spraying with Mineral™ Yellow   - increases the resistance of plants against pests   - foliar feeding (through leaves)	MINERAL™ RED	<b>4%</b> ( 40 ml / 1 l water ) ( 4 dl / 10 l water ) ( 4 l / 100 l water )
IN THE EVENT OF			
the appearance of first signs of a disease	Spraying plants on all above ground parts of plants - curative	MINERAL <sup>™</sup> YELLOW	<b>8 %</b> ( 80 ml / 1 l water )
(powdery mildew – Oidium (Uncinula necator), botritis etc)	Repeat at least 3 times every other day (day 1., 3., 5., (7.)) -market growers should use an appropriate (systemic) fungicide at once along with Mineral <sup>™</sup> Yellow but not in the same canister		(8 dl / 10   water) (8 l / 100   water)

the appearance of first signs of a pest	Spraying plants on all above ground parts of plants - curative	MINERAL™ RED	<mark>8 %</mark> ( 80 ml / 1 l water ) ( 8 dl / 10 l water )
	Repeat at least 3 times every other day (day 1., 3., 5., (7.))		(81/101 water)
( dust mites, leafhoppers (Erythroneura v.), etc.)	Do not spray at the same time with Mineral™ Yellow.		
	- market growers should use an appropriate insecticides		



## THE FRAMEWORK PROGRAMS FOR MINERAL<sup>™</sup> USE ON CEREAL CROPS

This instruction for Mineral<sup>™</sup> use on cereal crops is intended primarily for organic farmers on smaller surfaces.

Mineral<sup>™</sup> can be applied in the intensive production on large areas as well, but has to be integrated into the existing technology of basic and additional fertilization and the use of plant protection products.

Mineral<sup>™</sup> in intensive production of cereals can reduce the consumption of fertilizers to some extent and reduce the consumption of chemical plant protection products to the significant extent.

The reduction of chemicals in the production of cereal is an absolute must for the future. Chemical protection products are a growing problem with more restricted standards of registration, with prolonged withdrawal periods and with unhealthy remnants in the crops. Here, Mineral<sup>™</sup> can distinctly contribute to diminution of chemical protection of plants.

Watering with Mineral<sup>™</sup> Green is workable on smaller areas and less feasible on bigger surfaces. It will have good effects on plants in all types of the soil, sandy soil exempt.

Spraying with Mineral<sup>™</sup> Yellow and Mineral<sup>™</sup> Red is achievable on all kinds of fields.

In agricultural cereal crops production a dose of protective mean per unit of area is a measure, whereas the water consumption can be different. A dosage of Mineral<sup>™</sup> Yellow and Mineral<sup>™</sup> Red Mineral must not be less than 8 l/ha and not more than 12 l/ha in 200-300 of water for preventive spraying. For curative spraying the dosage is double, not less than 16 l/ha and not more than 24 l/ha in 200-300 of water. The exception is potato where more water has to be used due to the increased leaf mass of potato.

Take into account the general recommendations for correct spraying of crops:

- \* 1,5-3 bar pressure (no more than 4 bars),
- use the corresponding nozzles
  - For watering with Mineral<sup>™</sup> Greene even flat fan nozzles,
  - For spraying Mineral<sup>™</sup> Yellow and Mineral<sup>™</sup> Red flood nozzles with rotating jets
- speed of spraying 6-7 km/h (no more than 8 km/h)

Never spray in the wind or strong heat and not until the dew is on plants.

The development phases scale used for cereals is BBCH scale. (*Lancashire, P.D.; H. Bleiholder; P. Langeluddecke; R. Stauss; T. van den Boom; E. Weber; A. Witzen-Berger (1991). "A uniform decimal code for growth stages of crops and weeds". Ann. Appl. Biol. 119 (3): 561–60).*