

## VRM Topsoil Regeneration System



Since 1987, VRM Biologik® has developed and implemented technological advances globally that catalyze reactions in nature, aiding in soil restoration, resolving environmental emergencies and cleaning through attaining and sustaining ecosystem balance..

VRM's patented bacterial photosynthesis process results in much richer soil and therefore increases crop yields. It increases phosphorus in the soil by 100% VRM is more effective than traditional fertilizer. VRM's equivalent

input cost is approximately 54% lower than traditional chemical fertilizer.

14 Patents granted.

- ✓ Soil restoration
- ✓ Animal husbandry
- ✓ Water/ environment
- ✓ Cleaning
- ✓ Carbon capture
- ✓ Drought solutions
- ✓ Food security

Unique regenerative sustainable farming technology that:

- ✓ Restores degraded and suboptimal topsoil.
- ✓ Naturally boosts soil moisture as a buffer for drought affected farms.
- ✓ Guaranteed to increase nutrient availability and create soil moisture -without rainfall.
- ✓ Natural biotechnology that cleans, restores, and neutralizes damaging environmental pollutants, accidental spills, polluted wastewater outflows, and controls organic degradation odor-without the use of harmful dispersion chemicals or superficial fragrances.

The science behind our world changing breakthrough

Only VRM uses a profoundly different, vastly more effective way to harness and boost soil health and vitality. This process creates better, richer, healthier soil, 100% chemical free.

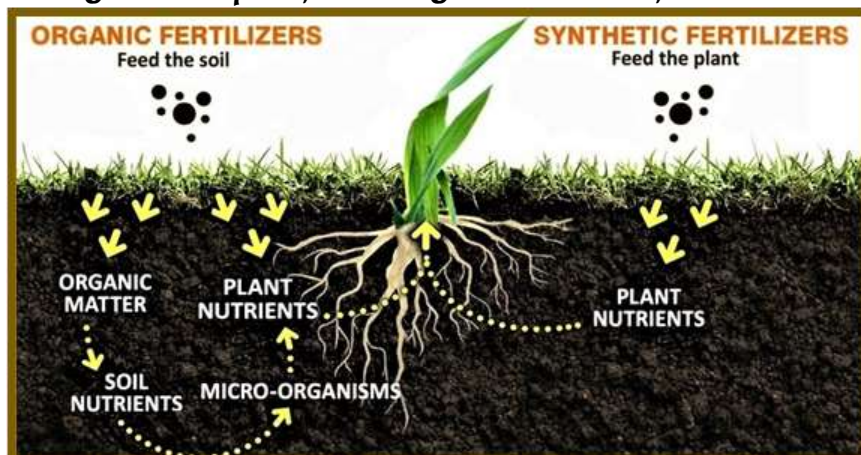
- ✓ Soil quality massively improves
- ✓ Soil nutrients increase
- ✓ Yields significantly improve
- ✓ Fertilizers can be replaced
- ✓ Drought is mitigated
- ✓ Farm values increase

The old paradigm creates topsoil erosion - how the world currently grows crops - green plant photosynthesis and chemical fertilizers Green Plant Photosynthesis does not work at night. So, the plant production system is working only half the time. In fact, at night CO<sub>2</sub> and water leave the plant Through constant land use over time, chemical-based farming practices deplete the soil of water and nutrients, requiring the use of ever more chemical fertilizers and pesticides. This promotes the long-term erosion and degradation of topsoil

The new paradigm - VRM farmers naturally grow crops, using bacterial photosynthesis. Water producing bacteria use nonvisible light including Infrared and UV rays as their key energy source. This light is present day and night which enables at least 2x yields from energy production 24 hours a day. This unique process of bacterial photosynthesis also notably improves yields through its unique ability to manufacture water in dry soil, without the need for rain or irrigation. This organic waste residue undergoes a continuous fermentation (patented process) using IR and UV light. It sequesters carbons from the air and converts the organic matter into natural fertilizers, through bacterial photosynthesis.

Application: When spread like a fertilizer over degraded topsoil, it reinvigorates the soil, and bacterial photosynthesis continues by stimulating the live bacteria in the soil. This process continuously produces water and nutrients, without the need for rain. The additional water produced in the soil, unlocks 'trapped' Phosphorus restoring soil health and releases nutrients without chemical fertilizers' natural boost of important nutrients is unlocked by soil microbes using the additional moisture, to make it soluble and therefore bioavailable to the plants.

Action: Use Contact Info - We'll assist with your grow test.





## SAFETY DATA SHEET

### VRM XLR8® Bio

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier	: 1/5/10
WHMIS Classification	: N/A
Product Use	: Soil enhancer
Manufacturer's Name	: <b>VRM Biologik Pty Ltd</b>
Street Address	: 22 Reward Crescent, Bohle, Queensland 4818 Australia
Phone	: +61 7 4774 6337
Date Prepared	: 16 September 2019

#### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	%	CAS Number	LD50 of Ingredient	LC50 of Ingredient
Pre-fermented food	80.0	N/A	N/A	N/A
Purified Water	19.67	7732-18-5	N/A	N/A
Syrup	0.3	68425-17-2	N/A	N/A
Yeast	0.03	68876-77-7	N/A	N/A

#### 3. HAZARDS IDENTIFICATION

Poisons Schedule (Australia)	: N/A
Hazard Categories	: N/A
Pictograms	: N/A
Signal Word	: N/A
Hazard Statements	: N/A

#### 4. FIRST AID MEASURES

Contact Point	Detrimental Results	First Aid Measures
Eye Contact :	May result in mild irritation. Avoid contact with water - based contact lenses.	Rinse with water for at least 15 minutes.
Skin Contact :	None at prepared dilutions.	N/A
Ingestion :	May cause nausea if swallowed.	Give water to drink, do not induce vomiting.
Inhalation :	None at prepared dilutions. Note: intentional concentration and inhalation of vapours may be harmful.	Remove victim to open and ventilated area.

## 5. FIRE FIGHTING MEASURES

Flammable Limits	: Non-Flammable
Means of Extinction	: N/A
Flash Point (Degrees C)	: N/A
Upper Flammable Limit (% by volume)	: N/A
Lower Flammable Limit (% by volume)	: N/A
Auto Ignition Temperature (Degrees C)	: N/A
Explosion Data - Sensitivity to Impact	: N/A
Explosion Data - Sensitivity to Static Discharge	: N/A
Hazardous Combustion Products	: N/A

## 6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures	: Nil
Clean Up Procedures	: Wash area with water to prevent stickiness.
Waste Disposal Information	: Dispose to sewer or with composted material.

## 7. HANDLING AND STORAGE

Handling	: Avoid excessive shaking. Vent storage containers during transport.
Precautions For Safe Handling	: None
Storage	: Store away from excessive heat.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits	: N/A
Respiratory Protection	: Exercise caution when concentration of vapour is possible.
Ventilation	: Exercise caution when concentration of vapour is possible.
Protective Gloves	: Rubber / Plastic Gloves recommended.
Eye Protection	: None at prepared dilutions.
Other Protective Measures	: None at prepared dilutions.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Liquid
Odour and Appearance	: Fermented Fragrance / Brown Colour
Odour Threshold	: N/A
Specific Gravity (H <sub>2</sub> O=1)	: 1
Vapour Density (Air=1)	: As Water
Vapour Pressure (mmHg)	: As Water
Evaporation Rate: (Butyl Acetate=1)	: As Water
Boiling Point (degrees C)	: 100
Freezing Point (degrees C)	: 0
pH	: 3.1 - 3.8
Coefficient of Water/Oil Distribution	: N/A
Solubility In Water	: Liquid Soluble
Percent Volatile By Volume	: < 0.5%



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## 10. STABILITY AND REACTIVITY DATA

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Stability	: Alcohol be released when sprayed as aerosol.
Conditions To Avoid	: Excessive direct heat may damage product. Avoid Inhalation of concentrated vapour.
Materials To Avoid	: Contact with Strong Alkali products may result in exothermic reaction.
Hazardous Decomposition Products	: None
Hazardous Polymerisation	: None

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## 11. TOXICOLOGICAL INFORMATION

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Effects of Acute Exposure	: N/A
Effects of Chronic Exposure	: N/A

### **Irritancy of Product**

Skin Sensitisation	: N/A
Respiratory Sensitisation	: N/A
Carcinogenicity-IARC	: N/A
Carcinogenicity-ACGIH	: N/A
Reproductive Toxicity	: N/A
Teratogenicity	: N/A
Embryotoxicity	: N/A
Mutagenicity	: N/A

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## 12. ECOLOGICAL INFORMATION

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Ecotoxicity	: Nil
Persistence and Degradability	: Nil
Mobility	: Nil
Other Adverse Effects	: Nil
Bioaccumulation potential	: Nil
Environmental Fate	: Nil
Environmental Impact	: Nil

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## 13. DISPOSAL CONSIDERATIONS

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General Information	: Dispose to sewer or with composted material.
Special Precautions for Landfil	: Recycle container where possible.



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## 14. TRANSPORT INFORMATION

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### LAND TRANSPORT

Proper Shipping Name	: VRM XLR8® Bio
Class	: Non-hazardous
Subsidiary Risk(s)	: Nil
EPG	: N/A
UN Number	: N/A
Hazchem	: N/A
Pack Group	: N/A
Special Precautions for user	: Nil

### SEA TRANSPORT

Proper Shipping Name	: VRM XLR8® Bio
Class	: Non-hazardous
Subsidiary Risk(s)	: Nil
UN Number	: N/A
Hazchem	: N/A
Pack Group	: N/A

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## 15. REGULATORY INFORMATION

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Poisons Schedule	: No Poisons Schedule number allocated
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## 16. OTHER INFORMATION

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For information on appropriate emergency procedures, seek medical advice. For emergencies, please contact +61 403 466 820 (24 hours)

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## VRM BIOLOGIK PTY LTD (ABN 14 137 264 496) - DISCLAIMER STATEMENT

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