



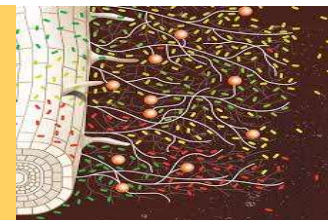
QCM360

Quality Controlled Plant Growth Promoting Rhizobacteria (PGPR)
Biological Equilibrium Farming™



MANUFACTURED & DISTRIBUTED BY
AgriLibrium (Pty)Ltd.
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MANUFACTURED IN SOUTH AFRICA

QCM360 (Quality Controlled Microbes) is a microbial product consisting of 6 selected plant growth promoting rhizobacteria. It is formulated with the purpose of stimulating root growth to ensure better root development, thus a larger and denser root system. This enables the roots to be in contact with more nutrients as well as more water, which will lead to more biomass / top growth.



QCM360 is a mixed culture of beneficial quality controlled aerobic and anaerobic microbes that can be applied as inoculants to increase and rectify the selected beneficial microbial population and diversity of soils and polluted areas. This in turn can improve soil quality and health, which enhances the growth, yield and quality of crops.

To improve the efficiency of **QCM360** it has to be applied simultaneously with **OrganoZipp** to serve as a food source for the micro-organisms.

COMPOSITION

Bacillus subtilis
Bacillus thuringiensis
Azotobacter chroococcum
Pseudomonas fluorescens
Lactobacillus
Streptococcus
Compost culture

PRODUCT PROPERTIES

S.G	1.05 ± 0.02
pH	3.2 ± 0.1
Appearance:	Dark Brown liquid with pleasant fermentation

STORAGE

Do not store in direct sunlight.
Storage temperature: 13°C - 25°C.

GENERAL RECOMMENDATIONS

Apply to soils where there is organic material in or on the soil in order for the micro-organisms to settle and sustain themselves and ultimately colonize the roots of the crop to produce growth stimulating plant hormones that will result in increased exudation of organic acids from the plant roots that will improve soil mineralization and free up bound nutrients.

Apply when soil temperatures are at least 15°C for microbial growth and multiplication.

The optimum rates for a season are between 30ℓ to 40ℓ liters/ha, which can be split into 3 or 4 applications (10 ℓ/ha) Apply 15ℓ to 20ℓ liters/ha **OrganoZipp** with **QCM360** split into 3 or 4 applications. (5 ℓ/ha)
Apply 10 ℓ/ha post-harvest application

DIRECTIONS FOR USE

Shake well before use.

Activate **QCM360** by adding **1ℓ OrganoZipp** to the 20ℓ container. Shake well, close cap loosely and leave to stand for 12-24 hours before use.



AFRI COMPLIANCE

We confirm that AgriLibrium's Manufacturing Facility and Product range conforms to the standards as set down by Afri Compliance Agricultural enhancement product protocols and is certified in terms of:

- ✓ Good manufacturing practices
- ✓ Quality assurance and traceability
- ✓ Good corporate governance
- ✓ Risk management
- ✓ Bio Security

Cert No.AC/P/2018/143

Contact your AgriLibrium representative to obtain a crop specific Plant Stress Management™ recommendation



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PRODUCT CHARACTERISTICS

1. *Bacillus subtilis* – 2 isolates

These 2 selected isolates are organisms that live in the root zone of plants where they produce plant hormones that stimulate root growth resulting in a large effective root system. Subsequently the roots then exudates specific soil mineralization organic acids that are responsible for solubilizing soil bound mineral nutrients, making it available for uptake by plant roots. The higher the number of these organisms the greater the improvement of plant growth that also results in enhanced pest tolerance in crops.

2. *Bacillus thuringiensis*

is a unique species that similarly to other *Bacillus* species, also form endospores for survival purpose's. However, in this case the spore capsule contains a specific protein with insecticidal properties that breaks down in the alkaline intestine of insects to form a toxic compound that digests the intestine membrane killing the insect. Several insect types like a number of cutworm species are being controlled in this manner.

3. *Azotobacter chroococcum*

isolate is a free-living soil bacterium that also associates with the plant root zone and specifically binds nitrogen for plant use. This organism also produces plant growth hormones in the root zone that stimulates root growth

4. *Pseudomonas fluorescens*

is an important organism responsible for plant hormone production in the root zone as well as the production of soil mineralizing organic acids. These organic acids are responsible for the subsequent solubilization of nutrients, improved uptake and growth. It also inhibits the multiplication of soil borne plant pathogens.

5. *Streptococcus*

This is a facultative anaerobic organism that utilizes the sugar exudates from the roots, converting it to lactic acid that is also an important soil mineralizing organic acid responsible for nutrient solubilization and improved uptake.

6. *Lactobacillus*

has the same functions as the above-mentioned organism.

7. Compost culture

is a mixture of bacteria and funguses that in mutual association break down organic material to usable active organic material in the form of humic and fulvic acids.

