

TECHNOLOGYPROFILE

Metavia™

Metavia centres on *Metarhizium brunneum* F52 in a granular biological insect-management profile. Its root-zone and substrate-related focus distinguishes it from foliar fungal products. The aim is to connect an insect-associated fungus with the location and life stage of the pest problem, alongside soil condition and the wider crop-establishment programme.

1 Product identification

Field	Detail
Product name	Metavia™
Category	Biological crop protection
Principal components	<i>Metarhizium brunneum</i> F52
Target crops	Lettuce · Pepper · Tomato · Grapes · Strawberry · Blueberry — Nursery growing media
Agricultural purpose	Soil-associated insect management

2 Product role and biological basis

A granular root-zone role

The granular format gives a different placement context from foliar liquids, keeping attention on pest problems associated with soil and growing media.

Match the pest stage

Pest location and life stage matter when assessing a fungal biological tool; a crop name alone does not establish whether the product is suitable.

Connect protection with establishment

Root-zone pest pressure is considered together with establishment, soil condition and crop observations, giving the protection objective a concrete context.

3 Composition and material characteristics

Metarhizium brunneum F52

Metavia centres on *Metarhizium brunneum* F52. Historical product and research records also use the name *Metarhizium anisopliae*; retaining this taxonomic connection makes the strain's technical literature easier to interpret.

A soil-associated biological approach

The F52 literature includes soil-associated pests and greenhouse crop systems. Pest identity, life stage and the formulation used in each study define the biological context and the relevance of the reported observations.

4 Published research

1. AAFC project BPR11-060, with Vineland and Harrow research centres: three chrysanthemum greenhouse trials, including cage and bench settings.

Thrips counts fell in the trials, but some comparisons were not statistically significant. The researchers judged the observed suppression insufficient by itself to prevent crop damage.

Agricultural relevance

AAFC project summary on the legacy F52 granular product in chrysanthemum greenhouses. Thrips suppression included non-significant comparisons and was insufficient on its own to prevent crop damage.

Agriculture and Agri-Food Canada (2019) - Project BPR11-060

2. Erler and Ates, 2015, Journal of Insect Science: controlled soil-box bioassays with *Polyphylla fullo* larvae.

The tested F52 granular formulation caused larval mortality; younger larvae were more susceptible than older larvae. These were controlled bioassays, not commercial field-performance trials.

Agricultural relevance

Controlled soil-box study of the tested F52 granular formulation and *Polyphylla fullo* larvae. Mortality and the greater susceptibility of younger larvae concern that granular formulation and controlled assay.

2015 - Potential of Two Entomopathogenic Fungi, *Beauveria bassiana* and *Metarhizium anisopliae*, as Biological Control Agents Against the June beetle (Coleoptera: Scarabaeidae)

5 Crop programmes and application context

Lettuce, pepper, tomato, grape, strawberry and blueberry are the crop contexts, specifically in nursery growing media. The US F52 granular label lists thrips pupae for lettuce, pepper and tomato, and thrips pupae plus vine-weevil larvae for grape, strawberry and blueberry. This is a nursery-media role, distinct from treating foliage or establishing a general field-soil insecticide use.

Lettuce, pepper and tomato nursery media

The F52 granular reference identifies thrips pupae in nursery growing media for these crops. This concerns a growing-medium insect stage and is distinct from a foliar insect-control use.

Grape, strawberry and blueberry nursery media

Thrips pupae and vine-weevil larvae are the named targets in the F52 nursery-media context for these crops. Crop identity, pest stage and the growing system remain linked in the technical record.

Nursery biological protection

Metavia's granular F52 role concerns nursery media. The available evidence does not establish a general field-soil insecticide use, nor does it make foliar and growing-medium applications interchangeable.

6 Quality and compatibility

Strain and formulation identity

Strain identity, viable biological content and formulation composition are relevant quality characteristics. Historical and current taxonomic names should remain traceable in the associated technical information.

Granular-material consistency

Physical uniformity, biological condition and storage stability provide complementary views of a granular fungal material. Crop-programme evaluation also considers the setting described by the applicable product information.

Evaluate biological protection within an integrated pest-management programme and the applicable product label.

7 Product questions

Is Metavia intended as a foliar insect-control product?

The documented F52 granular context is nursery growing media, with specified insect stages. Foliar uses and general field-soil uses are not established by those records.

How is Metavia different from Metavia CQ421?

Metavia centres on *M. brunneum* F52 granules in nursery media. Metavia CQ421 centres on *M. anisopliae* CQMa421 and separate crop-pest records. Strain, formulation and use context are distinct.

8 References and technical documents

Product specifications and application guidance are provided in the applicable technical data sheet and market label.

1. Agriculture and Agri-Food Canada (2019) · Project BPR11-060
2. 2015 · Potential of Two Entomopathogenic Fungi, *Beauveria bassiana* and *Metarhizium anisopliae*, as Biological Control Agents Against the June beetle (Coleoptera: Scarabaeidae)
3. *Metarhizium* interactions in plant research
<https://doi.org/10.3389/fpls.2020.535005>
4. Ecological context of insect-associated fungi
<https://doi.org/10.3389/fsufs.2020.00006>
5. Environmental associations of *Metarhizium* and *Beauveria*
<https://doi.org/10.1128/aem.02513-25>

Product information and technical support

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