



An Agricultural Sciences Company

Benevia[®] 100 OD

Insecticide

<u>CYAZY</u>PYR

BENEVIA® 100 OD INSECT CONTROL – POWERED BY CYAZYPYR®

Benevia® 100 OD insect control contains Cyazypyr® active ingredient, the second active ingredient from the anthranilic diamide class of chemistry, and the first to control a cross-spectrum of chewing and sucking pests. **Benevia® 100 OD** insect control provides excellent protection of foliage and developing fruit from important species of whitefly, aphids, thrips, leafminers, beetles, weevils, and Lepidoptera. **Benevia® 100 OD** insect control provides excellent protection of foliage and developing fruit from important species of whitefly, aphids, thrips, leafminers, beetles, weevils, and Lepidoptera. **Benevia® 100 OD** insecticide enters larvae primarily by ingestion, but also by contact exposure of the pest species and typically results in rapid feeding cessation within a few hours of exposure preventing foliar damage, fruit scarring and virus transmission. The formulation in **Benevia® 100 OD** insect control is designed for maximum leaf penetration and movement within the leaf, which enhances the product's ability to control a wide range of pests. It delivers a novel mode of action for sucking pests and controls pests that are resistant to other insecticides, making **Results**. insecticides, making Benevia[®] 100 OD insect control an excellent new tool for Integrated Resistance Management programmes.

BENEVIA® 100 OD INSECT CONTROL AT A GLANCE

| Registration No. | L10390, Act No. 36 of 1947 | | | |
|--|---|--|--|--|
| Active ingredients | Cyazypyr [®] active ingredient* 100 g/ <i>l</i> | | | |
| Chemical class | IRAC Group 28 – Anthranilic diamide | | | |
| Crops | Potatoes, Tomatoes, Tobacco | | | |
| Target pests | Target pestsPotato tuber moth (Phthorimaea operculella), Potato leafminer (Liriomyza huidobrensis), Semi-looper larvae (Chrysodeixis acuta), African bollworm larvae (Helicoverpa armigera), American leafminer (Liriomyza trifolii), Whiteflies (Bemisia tabaci and Trialeurodes vaporariorum) | | | |
| Use rate by application | Foliar application: 200 - 600 mt/ha | | | |
| Number of treatments | Maximum 2 applications per season, using a 7 – 14 day application interval between applications** | | | |
| Packaging | 250 ml, or 1 l bottle | | | |
| Cuanumum [®] active increations is the tr | adamark of quantranilianala. ** Consult the divertions for use on the label to correctly apply Banavia® 100 OD insect control | | | |

EFFECTIVE ON MULTIPLE LIFE STAGES

Benevia® 100 OD insect control has demonstrated its effectiveness on multiple life stages. When applied at the beginning of a pest infestation, Benevia® 100 OD insect control interrupts the reproductive cycle. It reduces egg hatch in some species and controls the immature stages helping to keep pest populations below economic threshold levels.

| | Life stage* | | | Rating | Designation |
|-------------|---------------------------------|--------------|-------|---|-------------|
| Pest | Eggs (ovicide or ovi-larvicide) | Immature | Adult | +++ | High |
| Lepidoptera | +++ | +++ | + | ++ | Medium |
| Beetles | not in scope | +++ | +++ | + | Low |
| Weevils | not in scope | not in scope | ++ | * Direct mortality of protection from plan feeding and disease transmission Source: Field trials, summary of laborato and field trials worldwide (2005–2010) | |
| Leafminers | not in scope | +++ | +++ | | |
| Whiteflies | +++ | +++ | +++ | | |
| Aphids | + | +++ | ++ | | |
| Thrips | + | ++ | ++ | | |

QUICK FEEDING CESSATION

Benevia® 100 OD insect control stops larval feeding very quickly and is superior to most competitors in this respect. This effect is due to impaired muscular movement of the insect almost instantly after exposure. The very rapid feeding cessation provides nearly immediate plant protection. Although unable to feed further, some larvae may not die until a few days after treatment. Affected larvae, that are either moribund and not feeding or dead, may temporarily adhere to the leaf from dried insect regurgitation that may occur after exposure to this mode of action.

OUTSTANDING EFFICACY

- Quick feeding cessation preventing foliar damage, fruit scarring and virus transmission.
- Unique cross-spectrum activity on a range of key chewing and sucking pests.
- Impact at multiple stages in life cycle.
- Offers translaminar activity (moves into and across the leaf surface), providing good residual activity and better control.
- · Works through ingestion, contact, and ovi-larvicidal activity.
- The very low mammalian toxicity of the product allows quick re-entry after spray solution has dried and has minimal impact on field operations.
- While highly potent to target species, Benevia[®] 100 OD insect control has minimal impact on beneficial insects and therefore is outstandingly suitable for Integrated Pest Management programmes, when used as directed.
- Excellent worker safety profile.
- Rainfast when spray is dry.

USE PLANT PROTECTION PRODUCTS SAFELY AND WITH RESPONSIBLE CARE. PLEASE ALWAYS FOLLOW THE LABEL WHEN APPLYING PLANT PROTECTION PRODUCTS.

-FMC

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CROSS-SPECTRUM CONTROL

Benevia® 100 OD insect control provides excellent crop protection against a cross-spectrum of sucking and chewing pests, including important species of whitefly, aphids, thrips, leafminers, beetles and Lepidoptera. This helps simplify spray programmes and makes Benevia® 100 OD insect control a valuable Integrated Pest Management (IPM) tool for the control of highly prolific pests.

| Cross-spectrum activity of Benevia® 100 OD insect control in comparison with selected insecticides in different Mode of Action groups* | | | | | |
|--|-----------------------------------|--------------------------|---------------------------|-------------------------|-----------------------|
| Pest | Cyazypyr [®] Group 28 | Imidacloprid Group 4A | Spirotetramat Group 23 | Indoxacarb Group 22A | Spinetoram Group 5 |
| Aphids | ++ | +++ | +++ | - | - |
| Leafhoppers | + | ++ | + | ++ | - |
| Planthoppers | ++ | ++ | + | - | - |
| Whiteflies | +++ | ++ | + | - | - |
| Thrips | ++ | + | - | - | +++ |
| Beetles | ++ | +++ | - | + | - |
| Weevils | ++ | ++ | - | ++ | - |
| Fruit Flies | +++ | +++ | - | + | ++ |
| Leafminers | +++ | ++ | + | + | ++ |
| Sawflies | ++ | ++ | - | ++ | ++ |
| Lenidontera | +++ | _ | _ | +++ | +++ |

* Ratings based on a composite of data across species within group and from multiple FMC global field trials. Some exceptions may exist on a study-by-study analysis of the data.

| Rating | Designation | Efficacy level |
|--------|-------------|-------------------|
| +++ | Excellent | 91–100% |
| ++ | Good | 75–90% |
| + | Moderate | 60–74% |
| - | Poor | <60% |

Source: Internal field trials, summary of multiple field trials across geographies (2005–2010).

Farming methods

RESISTANCE MANAGEMENT

According to the IRAC International mode of action classification scheme (www.irac-online.org), **Benevia®100 OD** insect control component belongs to

| GROUP | 28 | INSECTICIDE | | |
|---|----|-------------|--|--|
| sustainable use of Benevia[®] 100 OD insect control, a good | | | | |

For sustainable use of **Benevia® 100 OD** insect control, a good resistance management is essential. Guidelines to be considered:

GOOD AGRICULTURAL PRACTICE

- INTEGRATED PEST MANAGEMENT
- Follow the label instructions and carefully check the number of applications registered for a product in a crop per year. Don't reduce rates, follow the recommended application timing and spray volume.
- 1. Farming methods to limit weed, disease and pest damage
- 2. Tracking in the field or any other detection method
- 3. Pest identification
- 4. Population monitoring
- 5. Alternating insecticides with different modes of action

SAFE USE

Safety is a priority at FMC, and we encourage farmers and other workers to use our products with care. We recommend that they:

- Reduce potential user exposure through improved application techniques;
- Reduce dermal and inhalation exposures by the proper use of appropriate Personal Protective Equipment (PPE);
- Reduce any environmental impact with effective container rinsing, correct disposal and avoidance of surpluses.

FOR MORE INFORMATION

Put this powerful tool to work for you. Contact your local crop protection retailer, or FMC representative to learn how you can get more consistent control of key pests in various crops with **Benevia® 100 OD** insect control.

For more information please contact: FMC Chemicals (Pty) Ltd PO Box 44, Postnet Menlyn Waterkloof Glen, 0181 Republic of South Africa. Tel: +27 12 003 2938.

Benevia® 100 OD contains cyantraniliprole (anthranilic diamide) (Cyazypyr®), Reg. No. L10390 Act No. 36 of 1947, caution. Benevia® 100 OD and Cyazypyr® are trademarks of FMC Corporation or an affiliate. Date: 09/2020.

| Treatment | Integrated | observatio |
|-----------|------------|----------------------|
| | pest | |
| Product | management | Pest identificati |
| choice | Monitoring | |