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CITRUS PRODUCT RANGE

SOUTH AFRICA

PRODUCT	WITHOLDING PERIODS (Minimum number of days between last application and harvest)	Broadleaf weeds	False Codling Moth (larvae)	Citrus nematode	Citrus thrips	Mediterranean Fruit fly	Natal Fruit fly	Red Scale	Aphid	Mealy bug
AURORA® 40 WG	None	X								
CORAGEN®	7		X							
EXIREL® 100 SE	7 (Thrips and fruit fly foliar application) 1 (Fruit fly bait application)				X	X	X			
RUGBY® 10 G	None			X						
RUGBY® 10 ME	None			X						
FYFANON™ 440 EW	7					X		X	X	X
RUFAST® EW (To be used in Limpopo Province only)	70				X					

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



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HERBICIDES

AURORA® 40 WG

REGISTRATION N°	L6794, Act No. 36 of 1947
COMPOSITION	Carfentrazone – ethyl (Triazolinone) 400 g/kg
FORMULATION	A water dispersible granule herbicide for post-emergent control of broadleaved weeds in orchards and other crops as listed.
HRAC GROUP	14
PACKAGING	12 x 100 g

WEEDS CONTROLLED

The following weed species are normally controlled by **AURORA® 40 WG** used at the recommended rate.

COMMON NAME	BOTANICAL NAME	GENERAL INFORMATION
Pimpernel Spiny Emex Musk Heron's Bill Fumitory Small cleaver Small mallow Small stinkweed Four-leaved all seed Wild radish	<i>Anagalis arvensis</i> <i>Emex australis</i> <i>Erodium moschatum</i> <i>Fumaria muralis</i> <i>Galium spurium</i> <i>Malva parviflora</i> <i>Pentzia suffruticosa</i> <i>Polycarpon tetraphyllum</i> <i>Raphanus raphanistrum</i>	Apply AURORA® 40 WG to actively growing weeds and ensure good coverage especially of larger, more mature weeds. Difficult to control annual weeds should be treated in early spring as a pre blossom application. Use a suitable buffer according to label directions where the water is known to be alkaline/ hard to obtain an ideal pH of 5. Serious localized or translocated damage may occur if spray or spray drift comes into contact with leaves, fruit and/or immature bark of trees, vines bushes or adjacent non-target crops that are not under treatment.

APPLICATION

AURORA® 40 WG works only by contact. It is therefore necessary to achieve a good overall coverage of the targeted plant.

CROP	DOSAGE	REMARKS
Citrus	25 g AURORA® 40 WG + 3 l ROUNDUP®/MAMBA® 360 SL / MAMBA MAX 480SL + surfactant (the addition of a suitable surfactant (Penetrex 0.5% or NPX Humectant 0.25%) will enhance the cosmetic effect and rapidity of action)	Apply as a directed interrow spray for the control of difficult weeds such as <i>Malva parviflora</i> , <i>Conyza bonariensis</i> , <i>Urtica dioica</i> when actively growing (ideal stage when weeds are 10 – 20 cm in height). Shield young trees with immature bark during application or use a covered sprayer. Ensure that contact is avoided on leaves, fruit and bark.

INSECTICIDES

FYFANON™ 440 EW

REGISTRATION N°	L9484, Act No. 36 of 1947
COMPOSITION	Mercaptothion (organophosphate) 440 g/l
FORMULATION	An oil in water emulsion contact and stomach insecticide for the control of pests as indicated.
IRAC GROUP	1 B
PACKAGING	4 x 5 l

PEST	DOSAGE	REMARKS
Red Scale (<i>Aonidiella aurantii</i>)	340 ml/100 l water	Use for light infestation. Apply at 80-100 % petal drop as a full cover spray. Spray mature trees once and if necessary, usually in the case of young trees, apply a second application 6-8 weeks later.
Aphid (<i>Toxoptera citricida</i>)	340 ml/100 l water	Apply as a high volume full cover spray to new growth when aphids appear.
Mealy bug (<i>Planococcus citri</i>)	340 ml/100 l water	Apply as a high volume full cover spray when the pest appears. Repeat the application 2-3 weeks later.

NOTE: Will also control Soft brown scale, Mussel scale, Thrips and Australian bug if present.

Fruit fly (<i>Ceratitis capitata</i>)	200 ml + 8 kg sugar or 500 ml protein hydrolysate	Apply the bait as a coarse droplet spray in 200-300 liters spray mixture/ha. Treat every row or tree on at least one side. Repeat applications on a weekly basis and after rain. Protein hydrolysate: To ensure optimum attraction of fruit flies, the rate is based on a minimum of 800-1000 ml protein-based product/ha.
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INSECTICIDES

CORAGEN®

REGISTRATION N°	L8529, Act No. 36 of 1947
COMPOSITION	Chlorantraniliprole (anthranilic diamide) 200 g/ℓ
FORMULATION	A suspension concentrate stomach and contact insecticide for the control of various insect pests on a variety of crops as listed.
IRAC GROUP	28
PACKAGING	10 x 1 ℓ, 20 x 200 ml

PEST	DOSAGE	REMARKS
False Codling Moth (larvae) (<i>Thaumatotibia leucotreta</i> = <i>Cryptoplebia leucotreta</i>)	17.5 ml/hℓ spray mixture	<p>Apply CORAGEN® as a full cover application at spray volumes varying between 2000 and a maximum of 8500 litres spray mixture per hectare, depending on the size of the trees and the growth stage of the crop. Proper coverage of fruit is essential for optimal control.</p> <p>Always apply CORAGEN® as part of an integrated pest management program (IPM) in citrus. For optimum timing of CORAGEN® applications it is recommended to monitor male moth activities from the beginning of October throughout the growing season in the orchard (or a close by orchard in the case of a mating disrupted orchard).</p> <p>Apply CORAGEN® as a preventive application, as soon as the false codling male catches starts increasing during the latter part of the growing season (from about 16 weeks before the intended harvest date). A second CORAGEN® application is recommended at a spray interval of 6 to maximum 8 weeks later.</p> <p>When CORAGEN® is used in orchards where the false codling moth activity is not monitored, the first CORAGEN® application should be made 14 to 12 weeks prior to the intended harvest date, followed by a second CORAGEN® application 6 to maximum 8 weeks later. If only one CORAGEN® application is to be made for protection in the period close to harvest, apply CORAGEN® 12 to 8 weeks prior to the intended harvest date of the crop. Do not exceed 2 CORAGEN® applications per season in total and do not apply more than 3 litres of CORAGEN® per hectare per season.</p>

RUFAS® EW

REGISTRATION N°	L6585, Act No. 36 of 1947
COMPOSITION	Acrinathrin (norpyrethric ester) 75 g/ℓ
FORMULATION	An oil in water emulsion: Stomach and contact acaricide for the control of thrips on citrus.
IRAC GROUP	3
PACKAGING	12 x 1 ℓ

PEST	DOSAGE	REMARKS
Thrips (<i>Scirtothrips aurantii</i>) (To be used in Limpopo Province only)	40 ml/ 100 ℓ water	<p>Bearing trees: Apply between 90-100% petal drop to just before calyx closure as a single, light cover spray to wet the foliage canopy and fruit uniformly to the point of run-off. If an outbreak of thrips occurs later in the season, use a different insecticide and observe the necessary withholding period.</p> <p>Nursery and non-bearing trees: Apply to active new growth to control thrips from damaging leaves.</p>



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INSECTICIDES

EXIREL® 100 SE

REGISTRATION N°	L10447, Act No. 36 of 1947
COMPOSITION	Cyantraniliprole (Anthranilic diamide) 100 g/ℓ
FORMULATION	A Suspo-emulsion ingestion insecticide for the control of various insect pests on crops as listed.
IRAC GROUP	28
PACKAGING	10 x 1 ℓ

PEST	DOSAGE/ha	REMARKS
Citrus thrips (<i>Scirtothrips aurantii</i>)	Light-Medium Foliar Cover Spray: 100 ml + 300 ml light or medium grade narrow distillation mineral spray oil/100 ℓ spray mixture.	EXIREL® 100 SE applications should commence before closure of the calyx at the end of flowering or when thrip activity is first noticed. These applications should be made as a light – medium foliar cover spray, avoiding run-off (2 - 10 litres per tree depending on tree size), ensuring even coverage. A second application can be made 14 days later depending on re-infestation of thrips. Do not apply more than 2 consecutive applications of EXIREL® 100 SE . N.B. No other surfactants/adjuvants/wetters other than a light to medium grade mineral oil as indicated under Application Rate for Citrus should be added to foliar applications of EXIREL® 100 SE as these combinations can sometimes cause damage (marking) of citrus fruit.
	Low Volume Coarse Droplet Bait Application: 75 ml + 200 g white sugar/100 ℓ spray mixture	Apply EXIREL® 100 SE before closure of the calyx or when thrip activity is first noticed. Applications should be made as a low volume (1 - 5 litres per tree, depending on tree size), coarse droplet, bait application to the trees ensuring even coverage. A second application can be made 14 days later depending on re-infestation. Do not apply more than 2 consecutive applications of EXIREL® 100 SE .
Mediterranean Fruit fly (<i>Ceratitis capitata</i>)	75 ml/100 ℓ spray mixture (minimum rate of 750 ml EXIREL® 100 SE /ha)	Apply as a high volume, full cover application at early stages of pest infestation, typically when adults are trapped and when the crop starts to be attractive for the adults. Make no more than two applications per season at a 7 day interval.
Mediterranean Fruit fly (<i>Ceratitis capitata</i>) Natal Fruit fly <i>Ceratitis rosa</i>	BAIT APPLICATION RATES Ground Application: 100 ml/ha + 400 - 1000 ml/hl Hymlure 425 RTU In 50 – 100 litres of water per hectare (Please note section under Use Restrictions on the Hymlure 425 RTU label with regard to rates for use on soft citrus or mandarin type cultivars eg. Nova and Minneola) Aerial Application: 100 ml/ha + 900 ml/ha Hymlure 425 RTU + 1 litre of water/ha (total of 2 ℓ spray mixture per hectare)	Application of fruit fly baits. Where possible use custom made rigs or specially adapted equipment for ground applications of Fruit fly bait. These should be made as scattered coarse droplet applications, aimed at the inside leaves of the canopy on the underside of the leaves as this is where fruit flies tend to congregate. Make the bait applications to at least one side of each tree in a row (When bait applications are made to rows on both sides of the interrow at the same time, the following interrow can be skipped) The other side(s) of the row(s) should be treated at the next application. Do not apply any other products including adjuvants surfactants and wetters with bait applications of EXIREL® 100 SE . Applications should be repeated at 7 day intervals. Do not apply more than a total of 5 EXIREL® 100 SE bait applications for control of fruit fly per season. Do not apply more than 3 consecutive applications of EXIREL® 100 SE at a time. Follow this with a “window” of 60 days with applications of an effective registered product with a different mode of action after which 2 consecutive bait applications of EXIREL® 100 SE can be applied again.

For more information please contact: FMC Chemicals (Pty) Ltd
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AURORA® 40 WG, CORAGEN®, EXIREL® 100 SE, FYFANON® 440 EW and
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RUGBY® 10 G

REGISTRATION N°	L4110, Act No. 36 of 1947
COMPOSITION	Cadusafos (organophosphate) 100 g/kg
FORMULATION	A granule contact nematicide for the control of nematodes in the crops listed.
IRAC GROUP	1B
PACKAGING	10 kg

PEST	DOSAGE	REMARKS
Citrus nematode (<i>Tylenchulus semipenetrans</i>)	3 applications of 15 g/m ² or 2 applications of 20 g/m ²	Apply at two monthly intervals starting application at the onset of the rainy season. Apply to moist soil. Area to be treated (the number of square metres treated, depends on size of basin area/canopy): Apply evenly to the soil in the tree basin (under the tree canopy) or treat the area covered by the micro-jet irrigation system. If sufficient rain does not fall immediately after application wash the product into the top layer of soil by sprinkler or micro-irrigation. (20-25mm water) SEE NOTES BELOW

Notes:
CITRUS

- Ensure that the correct amount of granules is evenly distributed over the treated area.
- RUGBY® 10 G may be used as a follow-up application after an initial Spring application of a systemic nematicide.

RUGBY® 10 ME

REGISTRATION N°	L6368, Act No. 36 of 1947
COMPOSITION	Cadusafos (organophosphate) 100 g/l
FORMULATION	An emulsion, oil in water contact nematicide for the control of nematodes in the crops listed.
IRAC GROUP	1B
PACKAGING	20 l

PEST	DOSAGE	REMARKS
Citrus nematode (<i>Tylenchulus semipenetrans</i>)	3 applications of 15 ml/m ² OR 2 applications of 20 ml/m ²	Apply at two monthly intervals starting application at the onset of the rainy season. Apply to moist soil. Area to be treated (the number of m ² treated depends on the size of the basin area/canopy): Treat the tree basin, under the tree canopy for an overall surface spray or the area covered by the micro-irrigation system when applied by this method. The product must be washed into top layer of soil by irrigation or rainfall immediately after application (20 – 35 mm) REFER TO NOTES HERE UNDER AND DIRECTIONS FOR USE: MICRO-JET AND DRIP IRRIGATION SYSTEM.

Notes:
CITRUS

- Ensure that the correct amount of RUGBY® 10 ME is evenly distributed over the treated area by using sufficient water to obtain good coverage.
- Take note that when RUGBY® 10 ME is applied through the micro-jet irrigation system, it will only control nematodes present in the area reached by the micro-jet.
- RUGBY® 10 ME may be used as a follow-up application after an initial spring application of a systemic nematicide.