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## Crop Guide – Macadamias

PLEASE REMEMBER TO ALWAYS READ THE LABEL BEFORE USING ANY CHEMICAL

### Fertilizer Program

Growth Stage	Nut Blend 13.04.19	Kynosol Root	Mag Sulphate	M.A.P TECH	FOLIAR LEAF SPRAYS				N	P2O5	K2O	Ca	Mg	S	B
					Nut Oemff	Kyno Fulvate	Kyno Bor	Kyno Kelp							
Maturity (Mar/Jul)	40kgs							5.2	1.6	7.6	0.68	0.8	4.4	0.04	
Pre Bloom	55kgs		20kgs	20kgs		2lts	2kg	9.55	7.4	10.45	0.94	3.71	9.1	0.48	
Bud Swell	50kgs	5lts	20kgs		3kgs	2lts	2kg	15.5			19			0.3	
Flowering	45kgs							5.85	1.8	8.55	0.77	0.9	4.95		
Nut Swell					3kgs	2lts		15.5			19	2.5	3.3	0.3	
Fruit Growth	40							5.2	1.6	7.6	0.68	0.8	4.4	0.04	
	230kgs/ha	5lts/ha	40kgs/ha	20kgs/ha	6kgs/ha	6lts/ha	4kgs/ha	4lts/ha	56.8	12.4	34.2	41.07	8.71	26.15	1.16

### Chemical Program

TARGET	MAGUIRES CHEMICAL	ACTIVE INGREDIENT	ACTIVE QUANTITY	DOSAGE	APPLICATION TYPE	PHI	NOTES
Aphids	Acetamiprid	acetamiprid	200g/kg	50g/1L	Foliar	14	Spray with a minimum of 200L mixture per ha. Do not apply more than twice per season to minimise



							development of resistance to Acetamiprid 200SP. Use with Aqua Right 5 for optimum pH.
Aphids	Imidacloprid 200SL	imidacloprid	200g/L	18ml per tree	Soil Drench	112	Note that imidachloprid is toxic to honeybees. Apply 2L water solution to soil directly around the base of tree trunk after clearing application area from weeds and mulch. Irrigate within 24hr after application.
Aphids	Confidor	imidacloprid	700g/kg	5g per tree	Soil Drench	112	Note that imidachloprid is toxic to honeybees. Apply 2L water solution to soil directly around the base of tree trunk after clearing application area from weeds and mulch. Irrigate within 24hr after application.
Aphids	Chlorpyrifos 480EC	chlorpyrifos	480g/L	100ml/100L	Foliar	83	Apply as a full cover spray as soon as the pest is noticed. Repeat the application 4 weeks later and so on if required. Use with Aqua Right 5 for optimum pH.
Bark Borer	Carbaryl	carbaryl	850g/kg	250g/100L	Foliar	0	Apply approximately 50 ml of spray mix directly into each tunnel by means of a knapsack applicator for control of stem borer or spray the lesions for bark borer control. Do not spray the entire tree. Treat only the affected areas on the stem. More stable in acidic media.
Bollworm	Magnectin 19.2EC	emamectin benzoate	19.2g/kg	100ml/100L	Foliar	14	Timing and frequency of applications should be made at first signs of insect infestation as indicated by local spray threshold. For best results apply soon after pest eggs have hatched. Treatment must be made before larvae penetrate fruit or stems.
Bollworm	Ampligo	chlorantraniliprole + lambda-cyhalothrin	100g/L + 50g/L	200-500ml/ha	Foliar	14	Maximum 4 applications per season. Apply before pests reach damaging levels based on economic thresholds. Scout fields and repeat sprays if populations start to rebuild, with a minimum of 7 days between applications. Use with Aqua Right 5 for optimum pH.
Bollworm	Fastac 10EC	alpha-cypermethrin	100g/L	10ml/100L	Foliar	30	High volume, full cover foliar application: 125 - 175 ml/ha. Use with Aqua Right 5. Maximum 2 applications per growing season. Warning against bollworm resistance.

Coconut Bug	Fenvalerate 20%EC	fenvalerate	200g/L	20ml/100L	Foliar	56	Apply as full cover spray with a mixture of 5ml Fenvalerate + 2ml Karate Zeon / 100 l water. Do not apply more than two sprays per season. Application may only be done post-flowering when bees are no longer active in the orchards and when there are no flowering weeds in or on the verges of the macadamia orchards. Aerial applications are strictly prohibited under any circumstances.
False Coding Moth	Magmectin 19.2EC	emamectin benzoate	19.2g/kg	100ml/100L	Foliar	14	Timing and frequency of applications should be made at first signs of insect infestation as indicated by local spray threshold. For best results apply soon after pest eggs have hatched. Treatment must be made before larvae penetrate fruit or stems.
False Coding Moth	Ampligo	chlorantraniliprole + lambda-cyhalothrin	100g/L + 50g/L	200-500ml/ha	Foliar	14	Maximum 4 applications per season. Apply before pests reach damaging levels based on economic thresholds. Scout fields and repeat sprays if populations start to rebuild, with a minimum of 7 days between applications. Use with Aqua Right 5 for optimum pH.
False Coding Moth	Blanket 150EC	indoxacarb	150g/L	250ml/ha	Foliar	14	Apply as a full cover foliar application at spray volumes from a minimum of 500L/ha depending on the stage of the crop. Apply when moth catches in pheromone traps which indicate an infestation of FCM or at the onset of ripening. Further applications should be made at 10-day intervals if necessary.
Leaf Roller	Magmectin 19.2EC	emamectin benzoate	19.2g/kg	100ml/100L	Foliar	14	Timing and frequency of applications should be made at first signs of insect infestation as indicated by local spray threshold. For best results apply soon after pest eggs have hatched. Treatment must be made before larvae penetrate fruit or stems.
Litchi Moth & Carob Moth	Ampligo	chlorantraniliprole + lambda-cyhalothrin	100g/L + 50g/L	200-500ml/ha	Foliar	14	Maximum 4 applications per season. Apply before pests reach damaging levels based on economic thresholds. Scout fields and repeat sprays if populations start to rebuild, with a minimum of 7

							days between applications. Use with Aqua Right 5 for optimum pH.
Macadamia Nut Borer	Magmectin Ultra Duo 112EC	acetamiprid + emamectin benzoate	64g/L + 48g/L	250ml/250L	Foliar	50	Use appropriate scouting and monitoring techniques to predict the onset of pest infestation. Apply as full cover spray.
Macadamia Nut Borer	Magmectin 19.2EC	emamectin benzoate	19.2g/kg	100ml/100L	Foliar	14	Use appropriate scouting and monitoring techniques to predict the onset of pest infestation. Start applications when MNB eggs are hatching, but before the neonate larvae penetrate the nuts. A medium cover spray is essential to ensure that all the nut clusters are adequately protected. If high infestations of MNB persist, repeat the application after 7-10 days. Maximum 4 applications of Magmectin 19.2EC per growing season. Maximum 2 applications of Magmectin Ultra Duo 112EC per growing season.
Macadamia Nut Borer	Acephate 200SP	acephate	750g/kg	75g/100L	Foliar	35	Make the first application after flowering stage when the pest activity is first observed but before the neonate larvae enter the nuts. All applications should be made as a medium to full cover spray. Do not exceed more than 4 applications per season.
Mealy Bug	Sivanto Prime	flupyradifurone	200g/L	200ml/100L	Foliar	14	High volume full cover application ensuring good coverage. Apply at first signs of infestation, preferably at crawler movement stage. Repeat application 6 weeks later. Maximum 2 applications per season
Mealy Bug	Chlorpyrifos 480EC	chlorpyrifos	480g/L	100ml/100L	Foliar	83	Apply after flower as a full cover spray. Follow-up with an additional application if necessary. Ensure thorough coverage of target area. Wetting bark of stem and all branches is essential.
Stem Borer	Carbaryl	carbaryl	850g/kg	225g/100L	Foliar	0	Apply approximately 50 ml of spray mix directly into each tunnel by means of a knapsack applicator for control of Stem borer or spray the lesions for bark borer control. Do not spray the entire tree. Treat only the affected areas on the stem.

Stink Bug	Ampligo	chlorantraniliprole + lambda-cyhalothrin	100g/L + 50g/L	200-500ml/ha	Foliar	14	Maximum 4 applications per season. Apply before pests reach damaging levels based on economic thresholds. Scout fields and repeat sprays if populations start to rebuild, with a minimum of 7 days between applications. Use with Aqua Right 5 for optimum pH.
Stink Bug	Thunder	imidacloprid + beta-cyfluthrin	100g/L + 45g/L	20ml/100L or 3ml/15L Knapsack	Foliar	21	Apply Thunder if more than 15 bugs per 10 trees are noticed, according to the tree shake method of assessment. Do not use the same trees each week. Apply when nuts are marble size and wet inside and outside of the tree canopy (Oct-Nov) and repeat 4 weeks later. A third application may be necessary 4 weeks after the second.
Stink Bug	Acephate 750SP	acephate	750g/kg	75g/100L	Foliar	35	Apply after flowering as a medium to full cover spray when the pest is noticed. Apply a 4-spray foliar programme (maximum) with 4-6 week intervals. Use with Aqua Right 5 for optimum pH.
Stink Bug	Chlorpyrifos 480EC	chlorpyrifos	250g/L	200ml/100L	Foliar	83	Apply as a full cover spray as soon as the pest is noticed. Repeat the application 4 weeks later and so on if required. Use with Aqua Right 5 for optimum pH.
Stink Bug	Fastac 10EC	alpha-cypermethrin	100g/L	10ml/100L	Foliar	30	High volume, full cover foliar application: 125 - 175 ml/ha. Apply with Aqua Right 5. Maximum 2 applications per growing season. Warning against bollworm resistance.
Stink Bug	Fenvalerate 20%EC	fenvalerate	200g/L	20ml/100L	Foliar	56	Apply as a full cover spray with as a mixture of 5ml Fenvalerate + 2ml Karate Zeon / 100 l water. Do not apply more than two sprays per season. Application may only be done post-flowering when bees are no longer active in the orchards and when there are no flowering weeds in or on the verges of the macadamia orchards. Aerial applications are strictly prohibited under any circumstances.
Stink Bug	Vantex 60CS	gamma-cyhalothrin	60g/L	5ml/100L	Foliar	14	Application timing is based on stink bug numbers. Scouting for stink bug is done according to the tree

							shake or "knockdown" method. Start monitoring stink bug numbers two weeks after flowering. when the economic threshold level of stink bug is reached (average of 0.4 stink bugs per tree using the "knockdown" technique). Up to 6 applications may be needed at 4-week intervals. Apply with Aqua Right 5.
Stink Bug	Karate Zeon 5CS	lambda-cyhalothrin	50g/L	10ml/100L	Foliar	7	Application timing is based on stink bug numbers. Scouting for stink bug is done according to the tree shake or "knockdown" method. Start monitoring stink bug numbers two weeks after flowering when the economic threshold level of stink bug is reached (an average of 0.4 stink bugs per tree using the "knockdown" technique). 2 to 3 applications may be needed per season. Use with Aqua Right 5 for optimum pH.
Thrips	Chlorpyrifos 480EC	chlorpyrifos	480g/L	100ml/100L	Foliar	83	Apply after flower as a light cover spray. Follow-up with an additional application if necessary. 2 applications per season max. Alternate with other active for resistance management.
Thrips	Imidacloprid 200SL	imidacloprid	200g/L	18ml per tree	Soil Drench	112	Note that imidacloprid is toxic to honeybees. Apply 2L water solution to soil directly around the base of tree trunk after clearing application area from weeds and mulch. Irrigate within 24hr after application.
Weevils – Banded fruit weevil	Fastac 10EC	alpha-cypermethrin	100g/L	10ml/100L	Foliar	30	Full cover; high volume application: 125-175ml/ha. Use with Aqua Right 5 for optimum pH.