

Ethon 720

GROWTH REGULATOR

DIRECTIONS FOR USE:

RESTRAINTS: DO NOT apply to weak or stressed plants.

DO NOT apply FARMALINX Ethon 720 Growth Reuglator following application of sodium chlorate, magnesium chlorate or diquat.

DO NOT apply to cotton if bolls have been killed by frost.

DO NOT apply if rain is expected within 8 hours of application.

DO NOT apply if day/night temperature is expected to be below 18°C.

DO NOT mix with hard (alkaline) water.

DO NOT apply before sufficient mature unopened bolls have developed to produce the desired yield.

CROP	ACTION	STATE	RATE (High volume)	WHP	CRITICAL COMMENTS
APPLES: Jonathan, Delicious	Advancement of maturity, improvement of red colour	Qld, NSW, Vic, SA, WA only	35 to 65 mL PLUS 20 mL X-77* non-ionic wetter per 100 L water (add "stop drop")	7 days	Ensure fruit has reached marketable size before treatment and keep trees under observation after spraying. Apply 2 to 3 weeks before normal harvest period and 7 to 14 days before desired harvest date. Ensure fruit is picked at the correct stage of maturity, as fruits not harvested will quickly become over-ripe. Note: For best results spray when temperatures are between 15° and 32°C. Continuing low temperatures will advance maturity but may reduce colouration, so use lower rate. Use higher rate for quicker response. Add a "stop-drop" to prevent premature loosening of fruit. Thorough coverage is essential. Apply to fruit only for the fresh fruit market or short term storage.
Tydemans Early		Tas only	25 mL/100 L water (add "stop drop")		
Gravenstein, Golden Delicious, Jonathan and Red Delicious	Thinning*	Vic, SA only	15 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water	7 days	Apply at full bloom OR up to 1 week following full bloom. A second thinning spray 10 to 14 days after the FARMALINX Ethon 720 Growth Reuglator spray may be necessary. On Gravenstein and Golden Delicious apply cabayr1 or 5 to 7.5ppm NAA (use higher rate for maximum thinning). On Jonathan and Red Delicious apply carbaryl or 4ppm NAA. Apply at the balloon blossom stage using a high volume sprayer at 4000 L/ha. DO NOT apply if rain is imminent. DO NOT use in sequence or in mixtures with NAA. If maximum temperatures are below 13°C after spraying, inadequate thinning may result, or if above 18°C excessive thinning may result. Only use high concentration when heavy set expected. *Note: For all thinning applications: The complex nature of fruit set and the possible variable action of chemical thinners due to weather conditions, make it difficult to give set recommendations and growers should consult their local agronomist.
Golden Delicious, Stark Crimson and Legana		Tas only	35 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water		
Golden Delicious, Red Delicious, Jonathan, Granny Smith, Lady William		WA only	35 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water		
All varieties	Aid complete removal of fruit from trees and encourage a biennial bearing habit (Excessive vegetable growth will be suppressed and the following bloom stimulated.)	NSW, SA, WA only	65 to 135 mL PLUS 25 mL X-77 non-ionic wetter per 100 L water	7 days	Apply just prior to full bloom OR 5 to 6 weeks later during early morning or late afternoon when slow drying conditions occur. Ensure thorough coverage of foliage and flowers or fruit. Note: Under normal weather conditions use lower rate for Delicious and higher rate for Jonathans as they are difficult to de-fruit. Consult the local Department of Agriculture for specific recommendations on other varieties. Warm weather following treatment will improve results, but if temperatures below 18°C prevail after spraying, fruit removal may be reduced, in the latter case use a higher dose rate. Fruit will loosen in 7 to 10 days and thinning should be complete within 2 to 3 weeks. Limbs can be lightly shaken to aid removal after this time.
			65 to 135 mL PLUS 25 mL X-77 non-ionic wetter per 100 L water		
	Retard vegetative growth and stimulate flowering of young apple trees in the following season				

CROP	ACTION	STATE	RATE (High volume)	WHP	CRITICAL COMMENTS
CHERRIES: Ron's Seedling, St. Margaret, Napoleon, Florence	Promotes evenness of maturity; early colour development	NSW only: Young district	20 mL/100 L water	7 days	Treatment with FARMALINX Ethon 720 Growth Reuglator: Apply when approximately 20% of the fruit show pink to red colour development, normally 7 to 10 days before harvest. Ensure thorough coverage of leaves and fruit. Note: High temperature at spraying or following spraying may accelerate results. DO NOT spray when mean daily temperatures exceed 32°C. DO NOT spray when rain is expected within 24 hours OR when temperatures are low (17°C or less) as this will delay or reduce the effect of FARMALINX Ethon 720 Growth Reuglator. Fruit will mature 3 to 5 days earlier than normal and will be loosened to allow easier harvesting. A high proportion of fruit will readily separate from the stalk when harvested.
Orange/Bathurst district		40 mL/100 L water			
TABLE GRAPES: Barliinka	To promote early uniform colouring	NSW, SA only	15 to 20 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water	14 days	Apply when 5 to 30 % of the berries are coloured (2-4 weeks prior to expected harvest). Use the higher rate to maximise the colouring effects required. Ensure thorough coverage of bunches although the foliage need not to be completely covered. Note: FARMALINX Ethon 720 Growth Reuglator may slightly reduce firmness of grapes. DO NOT use on grapes intended for long storage.
Red Emperor, Red Prince, Red Malaga, Cardinal, Muscat of Hamburg		NSW, Vic, SA, WA only	25 to 40 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water		
Flame Seedless		WA only			
WINE GRAPES: Semillon		Aids to mechanical harvesting	NSW only		
MANDARINS: Imperial	Thinning to increase fruit size, to reduce size of heavy crop and to even out the production cycle	Qld, NSW, SA, WA only	35 to 40 mL/100 L water	Not required	Apply during the early stage of fruit development for thinning and correction of the habit of alternate heavy and light crops. Apply as foliar spray when fruitlets are about 10 to 15 mm in diameter and when natural fruit drop is occurring. This is usually in November in Qld, December in SA and intermediate in NSW, WA and Vic. Weather conditions influence the degree of thinning and care must be taken not to over-thin. Note: Fruitlets should fall off 7 to 14 days after application. Aim to apply 13 to 15 L of spray per 4 to 5 m high tree. Use the higher rate when a very heavy crop is evident. DO NOT apply in cold weather (less than 18°C) OR when rain is likely within 1 to 2 days of spraying. DO NOT add surfactants or wetting agents as leaf fall may be increased. See also General Instructions.
		Vic only	25 to 35 mL/100 L water		
ORANGES: Navel		NSW, WA only	35 to 40 mL/100 L water		
Valencia		NSW, SA, WA only	40 to 45 mL/100 L water		
MACADAMIA NUTS: Own choice	Aid harvesting by promoting uniform nutfall	NSW, WA only	165 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water	7 days	Apply late March to early May when nuts are mature. Vary rate according to degree of loosening required. Note: Nuts will be stimulated to fall within 10 to 14 days after spraying. Mechanical shaking may be used 7 to 10 days after spraying. Ensure thorough coverage of foliage and nuts. Ensure tops and insides of trees are adequately sprayed. A small quantity of older leaves will fall after treatment, but production will not be adversely affected. DO NOT use on Teddington variety.
H2 Variety			55 to 105 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water		
PEACHES	Advancement and concentration of maturity	Vic only: Goulburn Valley	15 mL PLUS 20 mL X-77 non-ionic wetter per 100 L water	6 weeks	Apply once as foliar spray after commencement of the final fast growth stage. Timing depends on variety. Determine by measuring twice weekly, fruit circumference, of 20 tagged fruit/block. After rapid growth stage determined, wait 3 to 4 days for further confirmation, then spray. Thorough coverage is essential. Note: Instances have been recorded where this product, when applied in peaches at apparently the correct time, has resulted in premature fruit drop, fruit gumming and fruit splitting. See also General Instructions.

CROP	ACTION	STATE	RATE		WHP	CRITICAL COMMENTS
			General	Boom Sprayer		
PINEAPPLES (plus Urea)	Initiation of flowering	Qld, WA only	80 mL + 5 kg Urea/100 L water (Apply 30 mL solution/plant)	1.6 + 100 kg Urea in 2000 L water/ha (Boom spray)	7 days	Apply in March. Note: Rate should be doubled for plant crops which are growing vigorously at the time of application.
			40 mL + 5 kg Urea/100 L water (Apply 30 mL solution/plant)	0.8 + 100 kg Urea in 2000 L water/ha (Boom spray)		Apply in May-June OR September-October. Note: See above – February/March application of Urea.
PINEAPPLES (without Urea)	Initiation of flowering in ratoon		25 mL/10 L water (Apply 30 mL solution/plant)	6.0 L in 2000 L water/ha (Boom spray)		Apply February-March. Note: Use on the final crop in the block before eradication of the crop. Pineapples treated at the above time will be ready for picking 7 to 10 months after application.
			7 mL/10 L water (Apply 30 mL solution/plant)	1.5 L in 2000 L water/ha (Boom spray)	Apply in May-June OR September-October. Note: See above – February/March application without Urea.	
PINEAPPLES	Fruit ripening		–	1.7 L in 1000 L water/ha		FARMALINX Ethon 720 Growth Reuglator for ripening should only be used on even crops successfully induced for flowering with FARMALINX Ethon 720 Growth Reuglator. DO NOT use on fields intended for ratoon production. Treatment should be made when the forced fruit are beginning to show their first colour break. An initial harvest may be necessary to remove more advanced fruit before applying FARMALINX Ethon 720 Growth Reuglator. The remaining treated fruit will be ready for harvest at least 7 days following the FARMALINX Ethon 720 Growth Reuglator ripening application. Note: DO NOT use on fruit intended for the fresh fruit market. FARMALINX Ethon 720 Growth Reuglator for ripening is NOT SUITABLE FOR USE ON SUMMER PLANT CROPS because of scattered fruiting and high risk of forcing young suckers. Where natural fruiting has occurred prior to chemical induction, these natural fruit must be picked before FARMALINX Ethon 720 Growth Reuglator ripening. Treatment too early can result in a loss of yield and a reduction in fruit sugar levels.

CROP	ACTION	STATE	RATE (High volume)	WHP	CRITICAL COMMENTS
SUGAR CANE	Cane ripening	Qld, NSW, WA only	1 L/ha	6 weeks	Use in March-April to accelerate ripening in cane and increase c.c.s. Use on cane planted for early harvest, with harvest no later than August. Apply to actively growing and non-stressed cane with at least eight non-stressed green leaves. Cane varieties Q115, Q119,Q137, Q124, Q96, H56-752 and CP44-101 have all shown high to moderate response to ethephon. Shortening of some internodes and yellowing of leaves may occur without any effect on cane yield. Test any new varieties prior to application.
TOMATOES	Accelerate ripening, increasing yield	All States	1.2 L in 440 to 880 L water per hectare	7 days	Apply once in the season. Ensure thorough coverage of fruit and foliage, when fruit is 5 to 30% pink or red. To determine this pull a few plants, shake off fruit, weigh and determine above percentage. Optimum harvest maturity is expected 14 to 21 days after spraying. DO NOT use on greenhouse crops. Note: Temperature below 18°C retard colour development and may extend the interval between treatment and harvest. Treatment may cause some yellowing of foliage or defoliation. Sun scald or exposed fruit may occur under high temperature conditions following treatment.

CROP	MODE OF ACTION	STATE	RATE/ha	WHP	CRITICAL COMMENTS
COTTON	Acceleration of boll opening. Defoliation	Qld, NSW, WA, NT only	2-3 L in min 20 L water	7 days (H)	Apply when there are sufficient unopened mature bolls to produce the desired yield. Use higher rates: <ul style="list-style-type: none"> On stressed plants On heavy crop canopy If day/night temperature 5-7 days after treatment is expected to be below 22°C. Ensure thorough and uniform coverage of bolls. Refer to further instructions below.
	Pre-conditioning before defoliation		1.3 L in min 20L water		Apply when there are sufficient mature unopened bolls to produce desired yield. Apply defoliant 4 to 7 days later. Ensure thorough and uniform coverage of bolls. Refer to further instructions below.
	Defoliation#		0.5-1.0 L		Use in a tank with a registered rate of Thiadiazuron (eg DROPP*). Apply when there are sufficient unopened bolls to produce the desired yield. Total application volume should be no less than 20.0 L/ha. Ensure thorough and uniform coverage of bolls and leaves. # This mixture will also provide some acceleration of boll opening, however a subsequent application of a boll opener may be required to complete boll opening.

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS:

APPLES, CHERRIES, MACADAMIA NUTS, PINEAPPLES, TOMATOES, WINE GRAPES:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

DO NOT HARVEST FOR 6 WEEKS AFTER APPLICATION.

TABLE GRAPES: PEACHES AND SUGAR CANE:

DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

COTTON:
GRAZING:
DO NOT FEED COTTON STUBBLE OR GIN TRASH TREATED WITH FARMALINX Ethon 720 Growth Reuglator TO LIVESTOCK.

DO NOT GRAZE LIVESTOCK ON TREATED AREAS.

GENERAL INSTRUCTIONS

IMPORTANT

Apples:

— advancement of fruit maturity and improvement of red colour:

- Ensure fruit has reached marketable size before treatment and keep trees under observation after spraying.
- Ensure fruit is picked at the correct stage of maturity, as fruit not harvested will quickly become over-ripe.
- Continuing low temperatures will advance maturity and colouration; continuing warm to high temperatures, both day and night, will advance maturity but may reduce colouration.
- Apply to fruit only for the fresh fruit market or short term storage.

Apples – Thinning:

The complex nature of fruit and the possible variable action of chemical thinners due to weather conditions, make it difficult to give set recommendations and growers should consult their local agronomist.

Apples – Fruit Removal:

- Apply to trees to remove unwanted fruit and encourage a biennial bearing habit. Excessive vegetative growth will be suppressed and bloom the following season stimulated.
- Weather conditions are very important – warm weather following treatment will improve results, but if temperatures below 18°C prevail after spraying, fruit removal may be reduced. In the latter case, use the higher dose rate.
- Fruit will loosen in 7-10 days and thinning should be complete within 2-3 weeks. Limbs can be lightly shaken to aid removal after this time.

Imperial Mandarins and Valencia Oranges:

Apply during the early stage of fruit development for thinning and correction of the habit of alternate heavy and light crops. Weather conditions influence the degree of thinning and care must be taken not to over-thin.

EXCLUSION OF LIABILITY: As the degree of thinning may vary according to the conditions and over-thinning is possible, the decision to incur these risks is taken by the user, and the manufacturer and vendor exclude themselves from all conditions, representations, warranties, whether expressed or implied by the statute or otherwise and accept no responsibility for any losses which follow from the use of the product on mandarins or oranges as far as this is legally possible under the Trade Practices Act or any State legislation.

Cotton:

A foliar spray with FARMALINX Ethon 720 Growth Reuglator will accelerate opening of mature unopened bolls and enhance defoliation, which can result in earlier harvest and increased recoverable yield and quality. Some premature drop of small immature bolls may occur.

Harvest at optimum boll opening and optimum defoliation. Too late harvest may reduce quality and lint.

APPLICATION – Cotton

DO NOT apply before sufficient mature unopened bolls have developed to produce the desired yield of cotton. Bolls are mature when the seed coat turns light brown, the embryo fills the seed cavity with an abundance of creamy colour and cotyledons are well defined.

Treatment sequence:

- Light canopy: Apply FARMALINX Ethon 720 Growth Reuglator then apply defoliant 4 to 7 days later.
- Moderate to heavy canopy: First apply a preconditioner, then apply FARMALINX Ethon 720 Growth Reuglator as soon as sufficient leaves have dropped to expose the target bolls, usually 4 to 10 days later.

APPLICATION METHOD – Cotton

Apply by placement technique under the following range of conditions to achieve a target droplet density of 60 droplets per sq.cm.

Wind Direction: Cross Wind

Wind speed range: 6-20kph

Air Temperature: Maximum 32°C

Delta t: Maximum 10°C

Sugar Cane:

FARMALINX Ethon 720 Growth Reuglator may be applied by air or ground spray equipment. Apply in 30 L water/ha by air, and 110-150 L water/ha by ground spray equipment.

Apply during March-April on cane due for harvest no later than August. Consult your local FARMALINX agent or BSES officer.

Tomatoes:

- Temperatures below 18°C retard colour development and may extend the interval between treatment and harvest.
- Treatment may cause some yellowing of foliage or defoliation.
- Sun Scald of exposed fruit may occur under high temperatures conditions following treatment.

MIXING

Half fill spray tank with water, add the required amount of product, then remainder of water and mix well. DO NOT use alkaline water.

EQUIPMENT

FARMALINX Ethon 720 Growth Reuglator is corrosive to metals. Mix only the quantity of spray required for immediate use and DO NOT allow to stand in metal containers for more than 2 hours. Flush equipment thoroughly with water after use.

COMPATIBILITY

DO NOT mix FARMALINX Ethon 720 Growth Reuglator and sodium chlorate. This mixture will emit toxic chlorine fumes when heated.

CAUTION

EXPORT OF TREATED PRODUCE

Growers should note that Maximum Residue Limits (MRLs) or import tolerances do not exist in all markets for produce treated with FARMALINX Ethon 720 Growth Reuglator. Additionally, some export markets have established MRLs different to those in Australia.

If you are growing produce for export (either fresh, dried or for wine production), please check with FARMALINX Pty Ltd, your industry spray diary or peak industry body (eg. the Australian Wine Research Institute <http://www.waite.adelaide.edu.au/AWRI/>) for the latest information on MRLs and import tolerances BEFORE using FARMALINX Ethon 720 Growth Reuglator.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Refillable Containers 1000L: empty contents fully into application equipment. Close all valves and return to point of sale for refill or storage.

SAFETY DIRECTIONS

Product is harmful if swallowed. Attacks eyes. Repeated minor exposure may have a cumulative poisoning effect. Obtain an emergency supply of atropine tablets 0.6 mg. Protect eyes while using. When preparing spray and using the prepared spray, wear elbow-length PVC gloves and face shield or goggles. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

FIRST AID

If swallowed, do NOT induce vomiting. Give a glass of water. If swallowed, splashed on skin or in eyes, or inhaled, contact a Poisons Information Centre (Phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once. Remove any contaminated clothing and wash skin thoroughly. If swallowed, activated charcoal may be advised. Give atropine if instructed. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for FARMALINX Ethon 720 Growth Regulator is available from FARMALINX Pty Ltd on request. Call Customer Service on 02 9389 2455.

POISON
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

FARMALINX

Ethon 720

GROWTH REGULATOR

ACTIVE CONSTITUENT: 720 g/L ETHEPHON
(an anti-cholinesterase compound)

For crop thinning, loosening or ripening in various crops and for accelerating boll opening, defoliation and pre-conditioning before defoliation of cotton as specified in the Directions for Use table.

IMPORTANT: THIS LEAFLET IS PART OF THE LABEL ATTACHED TO THE CONTAINER. READ THOROUGHLY BEFORE OPENING OR USING THIS PRODUCT

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