

SEE FOLDER FOR USE INSTRUCTIONS  
ENCLOSED IN BOTTOM FOLD

# ALAR-85

A PLANT GROWTH REGULANT

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS**

**CAUTION**

Harmful if absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash hands and face thoroughly with soap and water after use or before eating or smoking.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**STORAGE** — Store in a dry location

**PESTICIDE DISPOSAL** — Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL** — Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**UNIROYAL**

*400 19*

**COMPOSITION**

Active Ingredient (by weight)	
Daminozide[butanedioic acid mono (2,2-dimethylhydrazide)]*	85.0
Inert Ingredients	15.0
<b>TOTAL</b>	<b>100.0</b>

\*U.S. Patents 3,240,799 - 3,334,991

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**STATEMENT OF PRACTICAL TREATMENT**

**IF SWALLOWED:** Drink promptly a large quantity of milk, egg white or gelatin solution; if not available drink large amounts of water. Avoid alcohol. Call a physician immediately.

**IF ON EYES OR SKIN:** Wash with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before use.

**IF INHALED:** and abnormal symptoms develop see a physician.

SEE LEFT SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENT.

Mfg. by UNIROYAL CHEMICAL — Division of UNIROYAL, Inc.

Naugatuck, Connecticut 06770

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**GENERAL INSTRUCTIONS AND PRECAUTIONS**

ALAR-85 is a water soluble plant growth regulant. It is effective in reducing vegetative growth, promoting flower bud initiation, increasing fruit set, controlling time of fruit maturity, preventing preharvest fruit drop, and generally improving market quality of fruit at harvest and/or after storage. See specific crop instructions.

1. ALAR-85 should be applied as a foliar spray in a manner that insures uniform and complete coverage.
2. Since ALAR-85 must be absorbed by the plant to be effective, best performance can be expected with good absorption conditions (a healthy well watered plant and slow drying conditions) and a rain free period of about 6 to 12 hours following application. Concentrate sprays (50 to 100 gals /A) of ALAR-85 may be used.
3. Do not spray ALAR-85 on any low vigor trees or trees under stress as from drought, low fertility, winter injury etc. Such treatment may accentuate reduction in vegetative growth and fruit size. ALAR-85 is most effective when used on healthy vigorously growing plants.
4. On fruit trees the earlier ALAR-85 is applied and the higher the rate used the greater the reduction of both vegetative growth and fruit size. Less reductions will occur on high vigor trees.
5. Spray ALAR-85 only once per year on fruit trees. Split applications are not recommended.
6. ALAR-85 is compatible with most commonly used spray materials. East of the Rockies it is generally recommended as a separate spray. Consult your advisor for local recommendations. Do not tank mix with highly alkaline materials (such as lime) or copper sprays or apply within 28 days (before or after) a copper spray application. Observe all precautions and limitations on labels of all products used. When ALAR-85 is mixed with water for spraying, use the mixture on the same day.
7. Do not graze animals on cover crops grown among sprayed trees.
8. Do not handle treated plants until sprays have dried.

**FOLLOWING SEASON EFFECTS**

ALAR-85 may promote an increase in fruit bud development and set the year following treatment. To maximize this advantage and assure optimum fruit size and quality, improve tree vigor through fertilization, pruning and uniform spray application. If excessive fruit set occurs, follow your normal thinning program. If excessive fruit set occurs accompanied by excessive size reduction, short thickened stems, shallow stem cavities and misshapen fruit, skip a year of ALAR-85 treatment and bring the trees to proper vigor through fertilization, pruning, thinning, etc. Always leave some untreated trees in each orchard for comparison.

**APPLES**

The effect of ALAR-85 will vary depending on time and rate of application. The higher the rate the greater the magnitude of effect during the year of treatment and the higher the possibility for following season effects (See Following Season Effects). Only one ALAR-85 spray may be used on apple trees during a growing season. From the following table select Spray Schedule, Timing A "Spring", Timing B "Mid-Season" or Timing C "Summer" and follow down the column for Time and Rate to Apply and Expected Desirable Effects.

**APPLE**

Spray Schedule	Timing A "Spring"		Timing B "Mid Season"		Timing C "Summer"	
<b>Time to Apply</b>						
General U.S.	10 to 21 days after petal fall when new vegetative growth is about 4-6 inches long		21 days after petal fall to 70 days before harvest		60 to 70 days before normal harvest or approximately half way between full bloom and maturity (see footnote 1)	
Northwest U.S.	10 to 14 days after full bloom		14 to 70 days after full bloom		70 to 80 days after full bloom	
<b>Rate to Apply</b>						
relative to Tree Vigor:	lbs/100 gal	lbs/A	lbs/100 gal	lbs/A	lbs/100 gal	lbs/A
Low Vigor	Do not use		Do not use		Do not use	
Moderate Vigor	1-1 1/2	4-6	1	3	1	2-3
Good to High Vigor	1-1 1/2	4-6	1	4	1	4
Very High Vigor	2	8	1	4	1	4
Young Non Bearing Trees	(See Special Instructions *1)					
Heavily Pruned Trees	(See Special Instructions *2)					
<b>Expected Desirable Effects</b>						
1 Maturity delayed*	Yes		Yes		Yes	
2 Red Color increased	Yes		Yes		Yes	
3. Preharvest fruit drop prevented	Yes		Yes		Yes	
4 Fruit firmness maintained	Yes		Yes		Yes	
5 Handling bruises reduced	Yes		Yes		Yes	
6 Scald reduced	Yes		Yes		Yes	
7 Water core delayed	Yes		Yes		Yes	
8 Fruit cracking reduced	Yes		Yes		Yes	
9 Weather check reduced	Yes		Yes		Yes	
10 Bitterpit & cork spot reduced	Yes		Yes		Yes	
11 Fruit size controlled	Greatest		Moderate		Least	
12 vegetative growth reduced	Greatest		Some to None		None	
13 Flower bud initiation promoted, increasing return bloom, set and yield	Greatest		Some to None		Some to None	
ALAR-85 maintains or improves quality while preventing drop	Use this timing where vegetative growth control and increased return bloom are primary objectives		Effects 11, 12, and 13 will be pronounced with an early mid season ALAR-85 spray and reduced with later applications		Use this timing where fruit quality and drop control only are primary objectives	

#### FOOTNOTES

1. Example. If Red Delicious are 150 days between bloom and maturity the ALAR-85 should be applied about 75 days after full bloom. (75 days before maturity).
2. Maintenance of vigorous trees is essential for best results. Annual pruning resulting in removal of weak wood, proper fertilization, and other cultural practices which contribute to high tree vigor should be used. Use leaf analysis services where available to assist in determining degree of tree vigor.
3. This dilution rate is based on applications of 400 gallons per acre (to drip point) on mature bearing trees. Most field experience has been with dilute sprays but concentrate sprays can be used if care is taken to get uniform and complete coverage. Do not exceed the per acre recommended rate.
4. In areas with short growing seasons treat good to very high vigor trees as moderate.
5. The higher rates achieve the longest delays in maturity.

#### APPLES

##### \*SPECIAL INSTRUCTIONS

1. To Bring Young Trees Into Bearing and Control Vegetative Growth:  
Rate: 1 to 2 pounds ALAR-85 per 100 gal. water  
Time: 10 to 21 days after full bloom when new growth is about 4 to 6 inches long. Spray to drip.
2. Vegetative Growth Control on Heavily Pruned Trees  
Rate: 1 to 2 pounds ALAR-85 per 100 gal. water (Do not exceed 8 lbs. per acre)  
Time: When regrowth (terminal or sucker) is about 4 to 6 inches long.  
Use sufficient spray solution to insure uniform and complete coverage. Use this spray where excessive vigor and associated pruning practices make it desirable to control regrowth throughout the entire tree.  
On Heavily Topped Trees — Use 2 to 4 pounds ALAR-85 per 100 gal. water (Do not exceed 8 pounds per acre) and direct the spray to the heavily pruned area in the tops of trees with lighter application on the remainder.

#### PEARS

##### (WASHINGTON and OREGON Only)

- To control premature ripening and aid in preventing preharvest fruit drop:  
Rate: 4 to 5 pounds ALAR-85 per acre on mature bearing trees  
Time: 18 to 24 days before normal harvest  
Apply in sufficient water to give uniform and complete coverage
- To promote flower bud initiation and control vegetative growth:  
Rate: 4 to 5 pounds per acre on mature trees  
Time: 7 to 30 days after full bloom  
Apply in sufficient water to give uniform and complete coverage. Use the higher rate on large and high vigor trees.
- To bring trees into bearing:  
Rate: 1 to 2 pounds ALAR-85 per 100 gallons water and spray to drip point  
Time: 7 to 30 days after full bloom.
- Apply only one ALAR-85 spray per growing season. NOTE — ALAR-85 will control preharvest fruit drop through 7 to 10 day normal harvest period or about 28 to 35 days after spray application. If it is desired to leave the fruit on the tree for a longer period of time, an additional approved "Stop-drop" material should be applied at the recommended dosage and timing.

#### PEACHES AND NECTARINES

- To improve fruit color, concentrate maturity and hasten ripening:  
Rate: 4 pounds ALAR-85 per acre on mature bearing trees. Apply in a minimum of 400 gals. per acre  
Time: From early to late pit hardening stage  
Use only once per growing season as a separate dilute spray in a thoroughly cleaned sprayer. Injury may occur as "shotholing" and possibly leaf drop especially on early varieties. Do not spray low vigor trees as fruit size reduction may occur. Do not use ALAR-85 on 'Cherokee' or 'Arm King' nectarines as it may cause excessive injury on these varieties.

#### PRUNES

##### (French Variety Only)

- To hasten ripening: (for California only)  
Rate: 2 to 4 pounds ALAR-85 per acre on mature bearing trees  
Time: 75 to 105 days after full bloom and no later than one month before harvest  
Apply in sufficient water to give uniform and complete coverage. Use the higher rate for earliest maturity and on very high vigor trees. Use only once per growing season.

#### SOUR CHERRIES

- To improve color, hasten ripening, concentrate maturity, decrease fruit removal force thus reducing shaker damage, prevent late maturity fruit swell and produce a uniform firm cherry for improved pitting and grade. To reduce vegetative growth, lessening wind whip damage and promoting fruit buds and set for the following season.  
Rate: 4 to 8 pounds ALAR-85 per acre on mature bearing trees  
Time: Approximately two weeks after full bloom  
Apply in sufficient water to give uniform and complete coverage. Use the higher rate for earliest maturity and on first time sprayed high vigor trees. Use only once per growing season.

#### SWEET CHERRIES

- To hasten ripening, concentrate maturity and improve fruit color:  
Rate: 4 to 8 pounds ALAR-85 per acre on mature bearing trees  
Time: Two weeks after full bloom  
Apply in sufficient water to give uniform and complete coverage. Use the higher rate for earliest maturity and on very high vigor trees. Use only once per growing season.
- WARNING: Premature green drop has been claimed to be sporadically associated with the use of ALAR-85 on sweet cherry trees under apparently unusual and undetermined physiological and/or physical stress conditions.

**GRAPES**

To increase yield of varieties benefitting from increased berry set (such as Concord) - To reduce rate of vine growth:  
Rate See Following Table

Vine Growth	Annual Pruning Weight per Vine (8 x 9 feet spacing)	Pounds ALAR-85 per acre
Low Vigor	Less than 2 pounds	Do not use
Medium Vigor	2-3 pounds	1-2
High Vigor	3 pounds or more	2 ?

Time First bloom to full bloom  
Apply in sufficient water to give uniform and complete coverage

**BRUSSEL SPROUTS**  
(Jade Cross Variety only)

For more uniform sprout development: (for use in California only)

Rate 2 to 4 pounds ALAR-85 per acre

Time When sprouts at the base of the plant are a size normal for hand topping

Apply in sufficient water to give uniform and complete coverage Hand topping must be done within seven (7) days after treatment Use only one spray during a growing season Do not apply within one month of harvest

**CANTALOUPES**  
(For Arizona and California only)

To reduce vine growth:

Rate 2 pounds ALAR-85 per acre

Time When plants have 2 to 4 true leaves

Apply in sufficient water to give uniform and complete coverage

**TOMATO TRANSPLANTS**  
(Do not use in California)  
For Use Before Transplanting

To retard stem elongation, delay early fruiting and aid in concentrating maturity:

For Field Grown Transplants: Apply once or twice as growth demands.

Rate: 5 pounds ALAR-85 per 100 gallons water

Time First spray - when plants are in the 1 to 4 true leaf stage

Second spray - 2 weeks after first

Apply to runoff using 25 to 50 gallons per acre

For Greenhouse Grown Transplants: Apply once or twice as growth demands.

Rate: 2 1/2 pounds per 100 gallons water

Time: First spray - when plants are in the 1 to 4 true leaf stage

Second spray - 2 weeks after first

Apply to runoff using 25 to 50 gallons per acre

**CAUTION:** Do not tank mix ALAR-85 with copper sprays or apply ALAR-85 within 7 days before or after a copper spray application

**IMPORTANT NOTICE** — Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

