



Amistar[®] Top

syngenta[®]



Amistar Top Fungicide

for Citrus Disease Control

Amistar Top Fungicide

Top-notch Disease Control in Citrus

Amistar® Top fungicide offers citrus growers reliable, sustainable and robust disease control for many important fungal diseases of citrus. It is a combination of the strobilurin fungicide (Group 11), azoxystrobin, and the triazole fungicide (Group 3), difenoconazole. This mixture represents an evolution of the Abound® brand currently registered as a foliar fungicide in citrus. Amistar Top provides enhanced control of citrus diseases due to the additive activity of two different mode of action fungicides. In addition, Amistar Top demonstrates rapid uptake with translaminar movement of difenoconazole and xylem-mobile movement of azoxystrobin.

Amistar Top is a broad-spectrum fungicide and provides important utility as a resistance management tool in citrus. Syngenta recommends that this mixture be used according to the Fungicide Resistance Action Committee (FRAC) guidelines for solo strobilurin fungicide products. Amistar Top has preventive, systemic and curative properties. Amistar Top is applied as a foliar spray and can be used in block, alternating spray or tank-mix programs with other crop protection products.

Amistar Top is proven to be safe on a wide range of citrus varieties when used according to the label directions. Not to mention, it can be used as a part of many Integrated Pest Management (IPM) programs due to its low-use rates, application flexibility and low risk to beneficials. Amistar Top is also registered for use on almonds, brassica (cole) leafy vegetables, bulb vegetables, cucurbit vegetables, filberts, grapes, pecans, peppers and other fruiting vegetables, pistachios, potatoes, tomatoes, tree nuts and tuberous and corn vegetables.



Serious Diseases of Citrus

Alternaria Leaf and Fruit Spot, Citrus Scab, Greasy Spot, Greasy Spot Rind Blotch, Melanose



Alternaria symptoms on citrus

Alternaria leaf and fruit spot (*Alternaria citri*) affects a number of citrus species, mainly tangerines and tangelos, and occasionally grapefruit. In severe cases, this disease can result in extensive fruit and foliage drop. Infected leaves show necrosis in the veins and stems. Leaf lesions range from large necrotic blighted areas to small spots with a halo. Small, slightly depressed black spots appear on fruit. The disease is more severe on trees with lush shoot growth promoted by heavy fertilization, excessive irrigation and pruning.



Scab symptoms on citrus

Citrus scab (*Elsinoë fawcettii*) affects the fruit, leaves and twigs of susceptible varieties of citrus, causing raised, conical lesions on citrus foliage and scab pustules on fruit. The disease can affect grapefruit, Temples, Murcotts, tangelos and other tangerine hybrids. Control is especially needed in fresh market fruit groves and in processing fruit groves where Temples are produced. In the Temple variety, the disease can reduce fruit size if severe.



Greasy spot symptoms on citrus leaves

Greasy spot (*Mycosphaerella citri*) first appears as yellow mottle on the upper side of the leaf, with matching, slightly raised, pale orange to yellow-brown blisters on the lower surface. The infected leaf areas become darker brown or black and greasy in appearance. Leaves often drop prematurely, long before lesions become dark and greasy. Greasy spot is most severe on grapefruit, pineapple oranges, Hamlin oranges and tangelos, but must be considered for all citrus varieties whether grown for the fresh or processed markets. Greasy spot infection of fruit can be a significant issue on fresh market grapefruit where it causes a condition known as **greasy spot rind blotch**. This disease thrives in conditions of high relative humidity and high temperatures.



Melanose symptoms on citrus

Melanose (*Diaporthe citri*) symptoms appear about one week after infection as small, brown, discrete, sunken spots, which later become raised and filled with reddish-brown gum. Pustules on leaves are first surrounded by a yellow halo. Diseased areas later re-green and form corky pustules. Pustules on fruit can become relatively large and can crack, forming a mudcake pattern. The disease severity is determined mostly by the amount of inoculum-bearing dead wood in the tree canopy and by the duration of wetting periods following rainfall or sprinkler irrigation. Wet, rainy conditions are conducive for infection, especially when rain showers occur late in the day and fruit stays continuously wet on warm nights. Grapefruit is the most susceptible to melanose, but it can affect all citrus varieties.

Technical Overview

Amistar Top Spectrum of Activity

- Alternaria leaf and fruit spot (*Alternaria citri*)
- Anthracnose (*Colletotrichum* spp.)
- Black spot (*Guignardia citricarpa*)
- Citrus scab (*Elsinoë fawcettii*)
- Greasy spot (*Mycosphaerella citri*)
- Greasy spot rind blotch (*Mycosphaerella citri*)
- Melanose (*Diaporthe citri*)
- Phomopsis stem-end rot (*Phomopsis citri*)
- Post bloom fruit drop (PFD) (*Colletotrichum acutatum*)

Amistar Top Technical Profile

Amistar Top	
Chemistry	Azoxystrobin [QoI inhibitor (FRAC Group 11)] and difenoconazole [demethylation inhibitor (DMI) class (FRAC Group 3)]
Formulation	SC containing 1.67 lbs of azoxystrobin and 1.05 lbs of difenoconazole per gallon
Packaging	2 X 2.5 gallon case
Precautions/Safety	Caution, Standard PPE, 12 hour Re-entry Interval (REI)
Tank Mix	Amistar Top is compatible with many tank mix partners; however, always consult the product label for complete use directions and precautions.

Amistar Top Label at a Glance*

Citrus	
Rate	10 – 15.4 fl oz/A
Maximum Amount Per Growing Season	61.5 fl oz/A of Amistar Top (1.5 lbs a.i./A of azoxystrobin-containing products and 0.5 lb a.i./A of difenoconazole-containing products)
Application Methods	Amistar Top can be applied by either ground or aerial application on citrus.
Minimum Gallons Per Acre (GPA)	Aerial applications: 10 GPA of water; Ground applications: 15 GPA
Preharvest Interval (PHI)	Amistar Top may be applied the day of harvest (0 day PHI) for citrus.
Adjuvants	An adjuvant may be added at recommended rates.
REI	12 hours
Rotation Crop Restrictions	Please address the product label for specific rotational crop restrictions.

*Always consult the product label for complete use directions and application information. For a complete list of registered crops, consult the product label.

Directions for Use

Amistar Top may be applied with all types of spray equipment commonly used for making ground and aerial applications. Proper adjustments and calibration of spraying equipment to give good canopy penetration and coverage is essential for good disease control.

Best Use Guidelines

- Amistar Top applications should begin prior to disease development and continue throughout the season on a 7- to 21-day interval following the resistance management guidelines.
- If disease pressure is high, use the shortest interval and highest rate.
- The addition of a spreading/penetrating type adjuvant such as a non-ionic based surfactant or crop oil concentrate or blend is recommended.
- Make no more than two sequential applications before alternating to another fungicide with a non-QoI (Group 11) different mode of action.
- Do not make more than four applications of Amistar Top or other Group 11 fungicides per season.
- For best results, sufficient water volume must be used to provide thorough coverage.
- Do not use Amistar Top in citrus plant propagation nurseries.
- Always consult the product label for complete use directions and application information.



Suggested Program for Disease Control on Citrus

AT = Amistar Top O = Oil E = Enable® C = Copper F = Ferbam Granuflo®

Recommended Spray Schedule for Amistar Top on Greasy Spot

	May	June	July
Heavy Infestation:		AT/O	C/O
Light Infestation:		AT/O	
Greasy Spot Rind Blotch:	C	AT/O	E/O+C/O

For optimal greasy spot rind blotch control allow no more than 30 days between applications. The use of horticultural oil with Amistar Top improves greasy spot control on foliage and fruit.

Recommended Spray Schedule for Amistar Top on Alternaria

	February	March	April	May	June
% Flush Expansion:		25% 50% 75%			
Light Infestation:			AT	C	C
Heavy Infestation:		AT	C	AT	C
					AT+O

Under heavy disease pressure copper applications in July and August may be required for complete control.

Recommended Spray Schedule for Amistar Top on Melanose

	March	April	May	June
Bloom:	E P F			
Fresh Oranges, etc.:		AT	C	AT+O
Fresh Grapefruit Light Infestation:		AT	C	C
Fresh Grapefruit Heavy Infestation:		AT	C	C
				AT+O

E = Early Bloom P = Peak Bloom F = Full Petal Fall

The use of horticultural oil with Amistar Top improves melanose control on foliage and fruit.

Recommended Spray Schedule for Amistar Top on Scab

	February	March	April	May	June
Bloom:		E P F			
% Flush Expansion:	25%	50% 75%			
Light Infestation:			AT	F or C	
Heavy Infestation:	AT		F	C or AT	

Under light infestations copper may be substituted for Ferbam if melanose control is required. Under heavy infestations copper may be substituted for Amistar Top if scab pressure is declining and melanose pressure is increasing.

Recommended Spray Schedule for Amistar Top on Post Bloom Fruit Drop

	February	March
Bloom:		E P F
Disease Incidence > 20% as indicated by IFAS PFD Model		AT+F
Do not exceed 10-14 days between treatments when disease conditions are favorable		

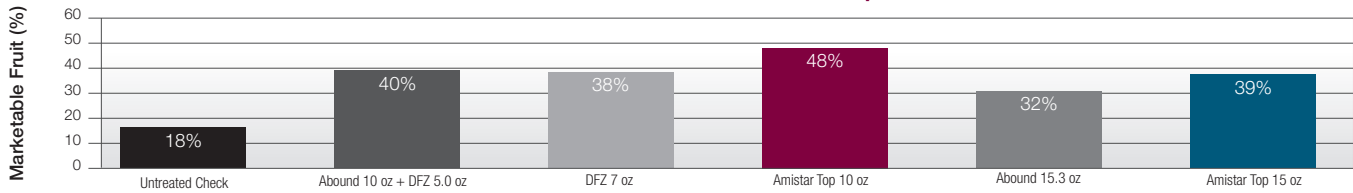
E = Early Bloom P = Peak Bloom F = Full Petal Fall

Under heavy disease pressure repeat applications may be required. Refer to IFAS recommendations for scouting and control recommendations.

Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations.

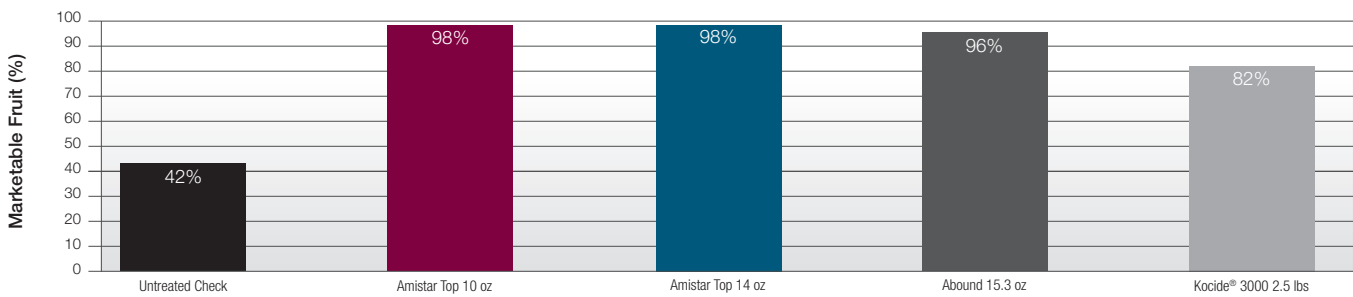
Performance Results

Alternaria Leaf and Fruit Spot



Source: USVA0F037 (2008), Fla., Dewdney. Tangerine – Nova. The data above reflects applications on 3/31/08, 4/28/08 and 7/22/08. Rated: 10/14/08.

Citrus Scab

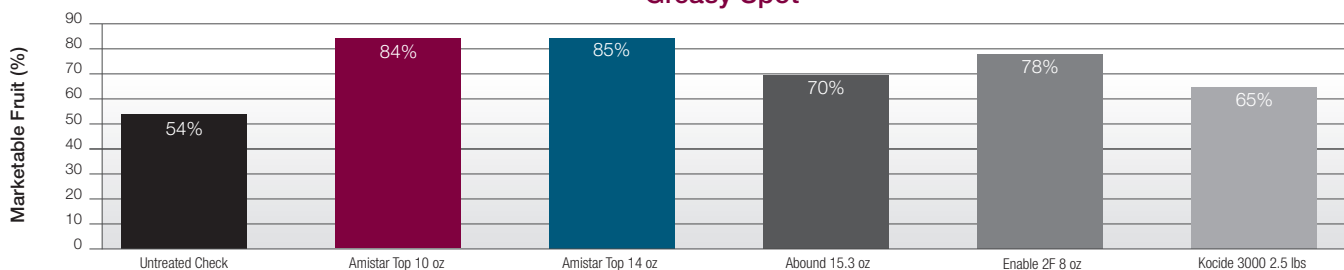


Source: USVF0F623 (2009), Fla., Buxton. Orange – Temple. The data above reflects applications on 3/19/09, 4/8/09 and 5/3/09. Rated: 12/9/09.

Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations.

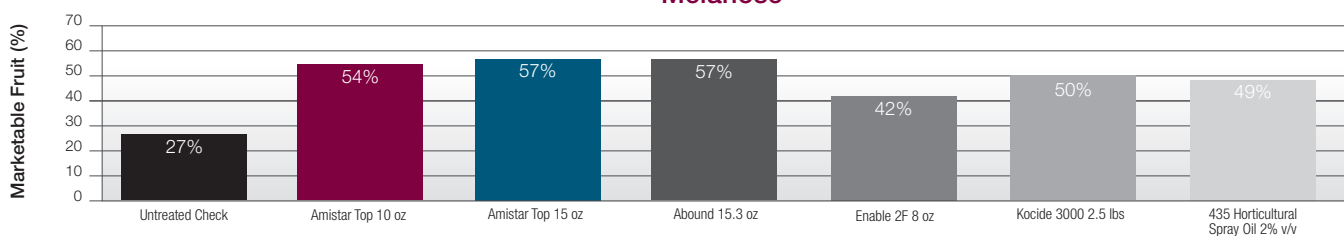


Greasy Spot



Source: USVA0F015 (2008), Fla., Kuhn. Grapefruit – Marsh Red. Low pressure <1.3 (0-5) in untreated check. Horticultural spray oil at 2% in all treatments.

Melanose



Source: USVA0F039 (2008), Fla., Dewdney. Grapefruit – Marsh. The data above reflects applications on 6/3/08 and 7/28/08. Rated: 2/5/09. Horticultural spray oil at 0.125% v/v with Amistar Top; horticultural spray oil at 2% v/v to all other treatments.

Performance assessments are based upon results or analysis of public information, field observations and/or internal Syngenta evaluations.





For more information, visit www.SyngentaUS.com or contact your local Syngenta representative.

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