



## Broad Spectrum Disease Control on Cucurbits

Regalia® is a powerful new product to manage Powdery Mildew, Downy Mildew, Gummy Stem Blight, and Phytophthora Blight in cucurbits. Regalia has been successfully evaluated in multiple university trials on all major cucurbit crops, including cucumber, watermelon, summer squash, cantaloupe, honeydew, muskmelon, and pumpkin. The development of fungicide-resistant pathogens is a constant challenge to growers. New Regalia is effective, proven, and has a unique mode of action that is an excellent tool in managing the development of resistance pathogens.



### Use Regalia on the Following Diseases:

Powdery Mildew • Downy Mildew  
Anthracnose • Gummy Stem Blight  
Phytophthora Blight



**Powdery Mildew on Cucumber**

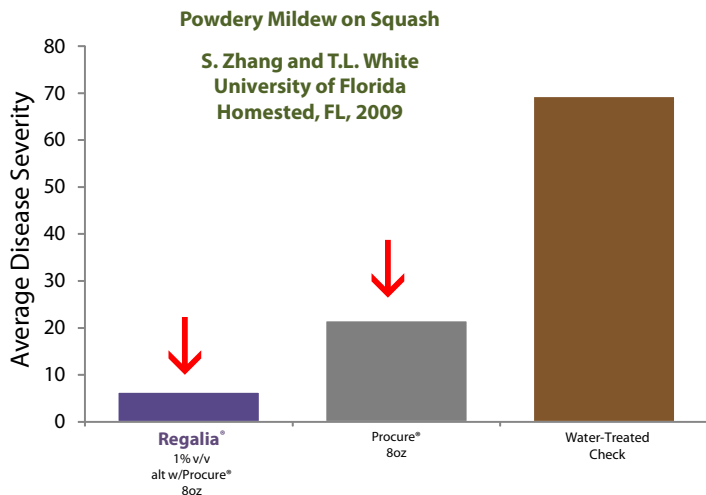


### How Regalia Works

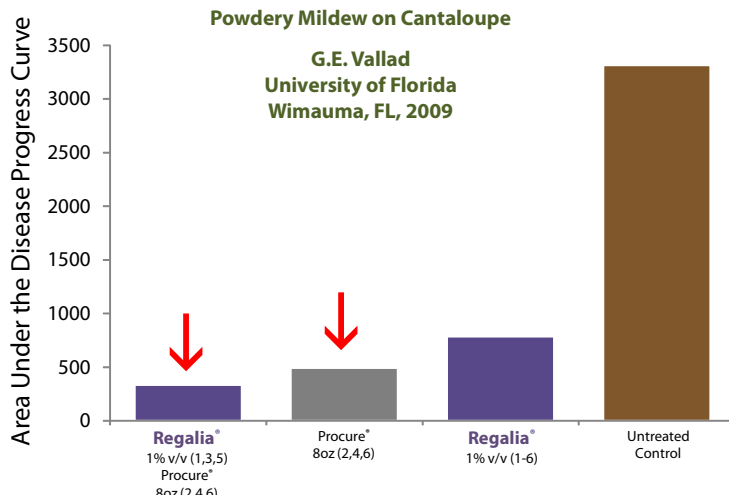
When treated with Regalia, the defense systems of crops are 'switched on' to protect against attacking diseases. Research proves that plants treated with Regalia produce and accumulate elevated levels of specialized proteins and other compounds known to inhibit fungal and bacterial diseases. Regalia induces a plant to produce phytoalexins, cell strengtheners, antioxidants, phenolics, and PR proteins, which are all known inhibitors of plant pathogens.

### Synergy with Other Fungicides

Regalia is proven to synergize other fungicides for superior disease control. University trials in Georgia prove that DMI fungicides such as tebuconazole, and strobilurins such as pyraclostrobin, are more effective at controlling Gummy Stem Blight when used with Regalia. Field studies on cantaloupe and squash in Florida prove that better control of a Powdery Mildew is provided by Regalia plus triflumizole (DMI fungicide) than by triflumizole alone. Additional research shows that Regalia plus myclobutanil is more effective on cucumber Powdery Mildew than myclobutanil alone (see inset).



- Treatments applied weekly starting 7 Days After Planting (DAP).



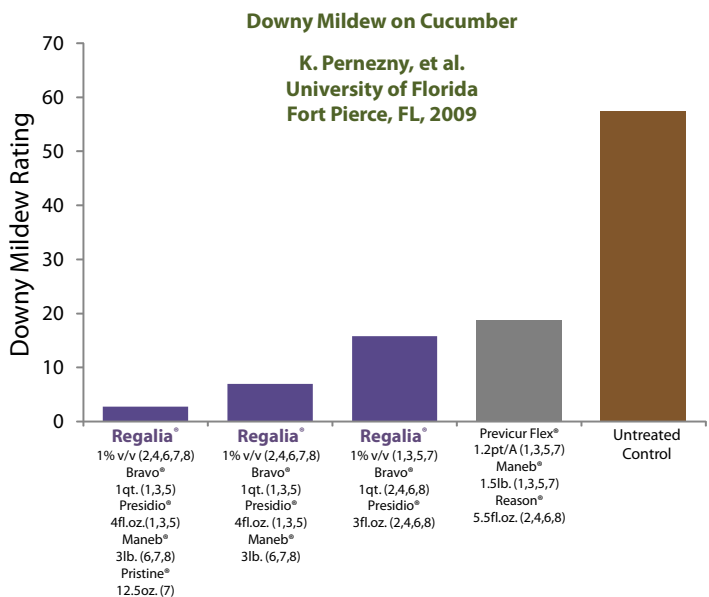
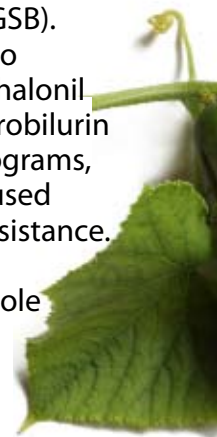
- Treatments applied 6 times: 1= Apr 9, 2= Apr 16, 3= Apr 23, 4= Apr 30, 5= May 7, 6= May 14.  
- Treatments applied in 40-100 gals of water per acre depending on crop maturity.

## Powdery and Downy Mildew

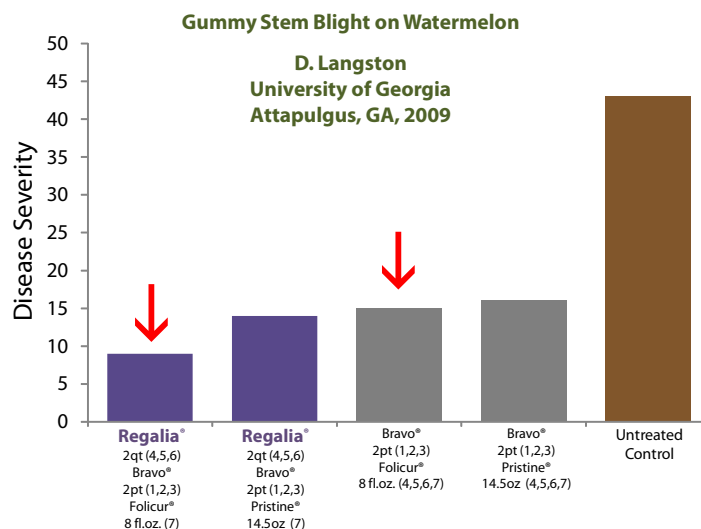
Regalia is an effective component in Powdery Mildew and Downy Mildew control programs. Strobilurin and DMI fungicides are often used to control Powdery Mildew, but there is a known risk of resistance to these classes of fungicides, and they should be used with other chemistries. Research proves that superior control of Powdery Mildew is provided by alternating Regalia with DMI fungicides such as Procure<sup>®</sup> and Rally<sup>®</sup>. And, unlike many other products, Regalia also has activity on Downy Mildew. Trials conducted in Florida show that IPM programs containing Regalia are effective at controlling Downy Mildew in cucumber.

## Gummy Stem Blight

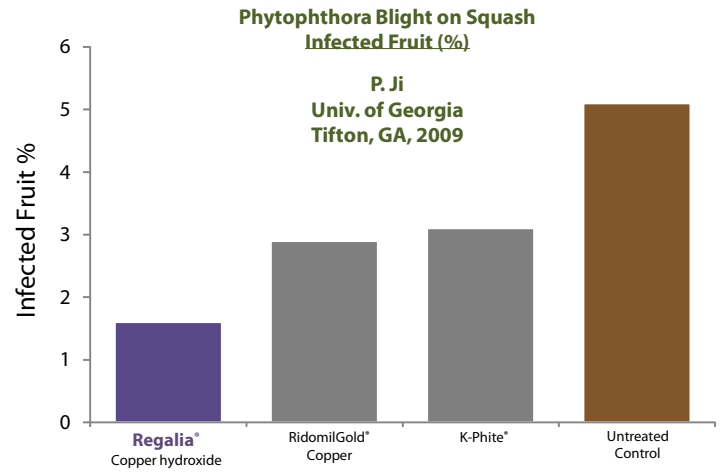
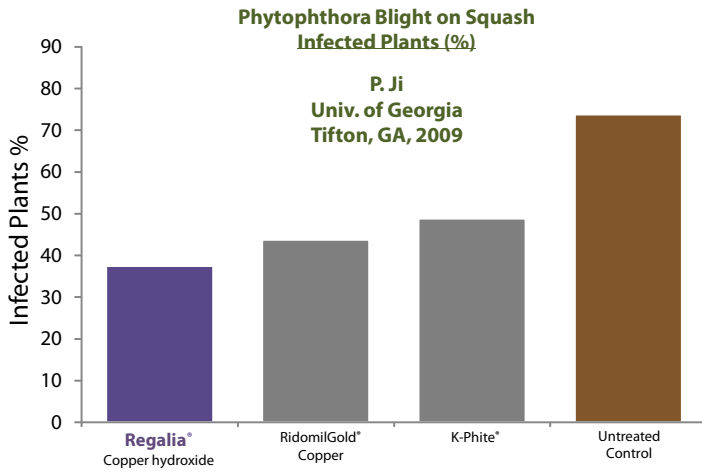
Adding Regalia to standard control programs improves control of Gummy Stem Blight (GSB). Historically, chlorothalonil has been used to control GSB, but growers combine chlorothalonil with other fungicides for better control. Strobilurin and DMI fungicides are often added to programs, but these classes of fungicides should be used with other products in order to manage resistance. Georgia field trials show that alternating Regalia with chlorothalonil and tebuconazole (DMI fungicide) provides better control than using chlorothalonil and tebuconazole alone.



- Treatments applied weekly for a total of 8 applications.  
- Treatments applied in 40-100 gal/A of water.



- Treatments applied seven times on: 1= Apr 27, 2= Jun 2, 3= Jun 9, 4= Jun 16, 5= Jun 23, 6= Jul 1, 7= Jul 8.



- Treatments applied weekly for 8 weeks.

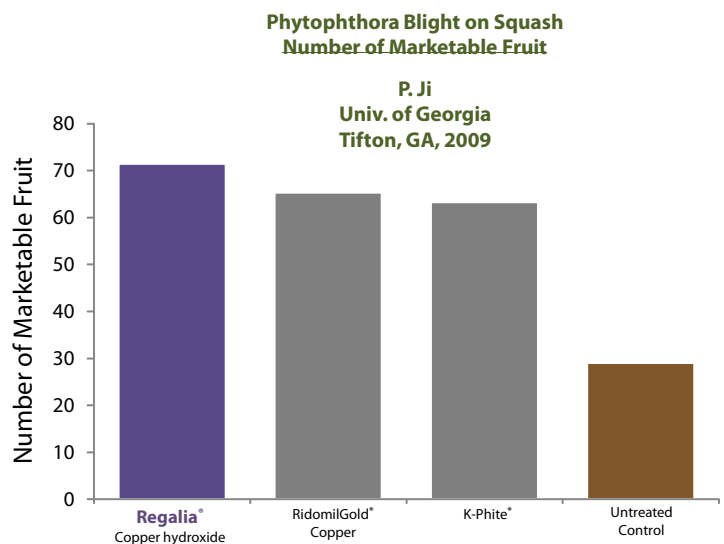
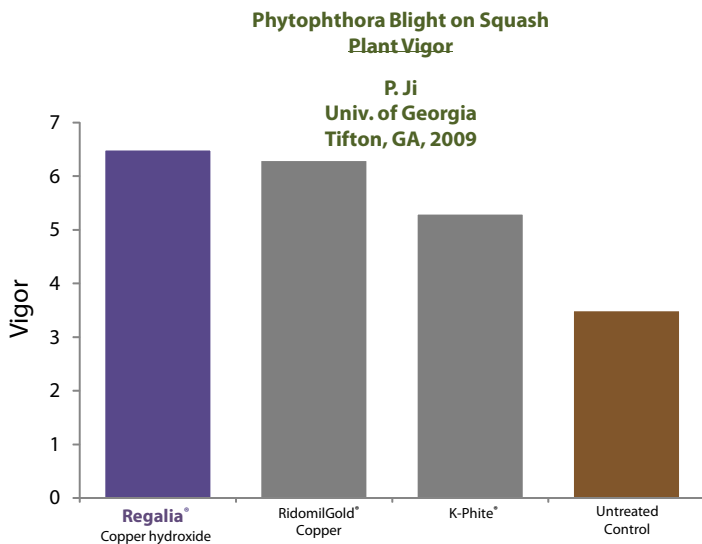
- Treatments applied weekly for 8 weeks.



## Phytophthora Blight

Effectively managing Phytophthora can be very challenging, and growers often implement aggressive preventative cultural and chemical practices to stay on top of this devastating disease. Regalia is effective on Phytophthora Blight when used as part of a total disease management program that focuses on prevention, cultural practices such as

proper water management, and implementation with other fungicides in a tank mix or rotational program. Historically, mefenoxam and copper have been relied on to protect plants from Phytophthora Blight, but in some areas mefenoxam is no longer effective when used alone. University research performed in Georgia shows that Regalia outperforms mefenoxam plus copper at reducing Phytophthora Blight, improving plant vigor, and increasing yield in squash. Implement Regalia in your total Blight management program for best control of Phytophthora.



- Treatments applied weekly for 8 weeks.


- Treatments applied weekly for 8 weeks.



## Compatibility

Regalia is compatible with DMIs such as Rally® and Procure®, strobilurins such as Quadris®, and many other types of pesticide chemistry including

quinoxifen, chlorothalonil, mancozeb, and copper. If compatibility with another product is unknown, a jar test should be conducted.

Product Name	Group	Phytophthora	Downy Mildew	Gummy Stem Blight	Powdery Mildew	FRAC	Resistance Risk
Regalia®	Plant Host Inducer	✓	✓	✓	✓	P	Low 
Copper hydroxide	Inorganics	✓	✓	✓	✓	M1	Low
Ridomil Gold® SL	PhenylAmides (PA)	✓				4	High
Aliette®	Phosphonates	✓	✓			33	Low
Mancozeb	Dithiocarbamates		✓	✓		M3	Low
Chlorothalonil	Chloronitriles		✓	✓	✓	M5	Low
Topsin®	Methyl Benzimidazole Carbamates (MBC)			✓	✓	1	High
Quadris®	Quinone outside Inhibitor (QoI)			✓	✓	11	High
Procure®	DeMethylation Inhibitors (DMI)				✓	3	Medium
Quintec®	Quinolines				✓	13	Medium
Sulfur	Inorganics				✓	M2	Low

## Regalia Best Use Recommendations

**Powdery Mildew-** When disease pressure is low, or likely to develop, apply Regalia at 1 qt per 50 gal of water at a 7-10 day interval. In moderate to high disease pressure situations, apply Regalia at 1 qt per 50 gal of water in alternation or tank mixed with a labeled rate of DMI, strobilurin, or quinoxifen fungicide. If disease is observed in the field prior to application, Regalia should be tank mixed with a systemic fungicide. Always apply Regalia in sufficient water using proper equipment to obtain maximum coverage of upper and lower leaf surfaces.

### Downy Mildew & Gummy Stem Blight-

When disease pressure is low or likely to develop, apply Regalia at 1 qt per 50 gal of water at a 7-10 day interval in alternation with a labeled rate of a chemical fungicide labeled for either downy mildew or gummy stem blight. In moderate to high disease pressure situations, apply Regalia at 1 qt per 50 gal of water tank mixed with a labeled rate of a chemical fungicide labeled either for downy mildew or gummy stem blight.

### For Suppression of Phytophthora Blight -

Apply Regalia at 1-4 qts per acre in combination with labeled rates of a copper fungicide.



[www.MarroneBio.com/Regalia](http://www.MarroneBio.com/Regalia)

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To control disease with powerful Regalia contact your local retailer, or call:

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 David Warman, Director of Sales, 336-202-3433