REGALIA®
BIOFUNGICIDE

A Powerful Fungicide for Disease Control on Strawberries

PRE-PLANT DIP AND FOLIAR SPRAY

Use Regalia® as a pre-plant dip and foliar spray on strawberries. Applying Regalia as a pre-plant dip reduces transplant shock and improves plant growth. Field trials prove that dipping transplants in a solution of Regalia prior to planting improves root growth and root quality. After planting, incorporate Regalia into your IPM program for improved disease control of Powdery Mildew, Botrytis, and Anthracnose (see inside for more information).

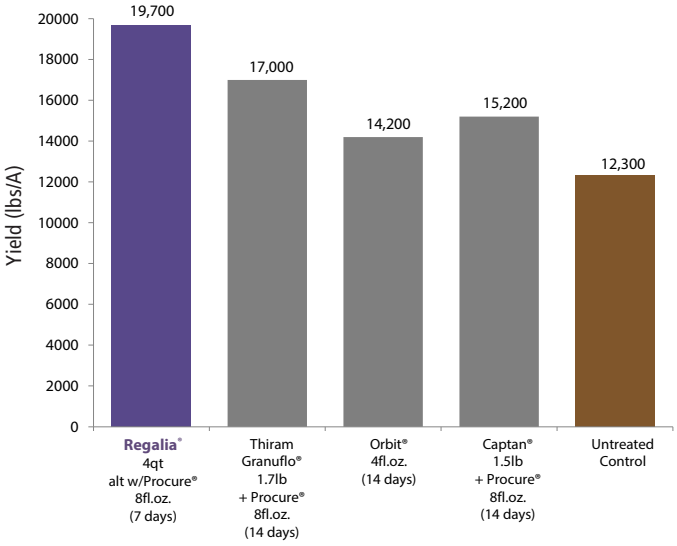
BROAD-SPECTRUM ACTIVITY

Botrytis Fruit Rot, Anthracnose Fruit Rot, and Powdery Mildew are three of the most devastating diseases in strawberry production. Many fungicides are only active against one or two of these diseases, but Regalia is active against all three (see chart on back). With Regalia in the program, growers get improved control over a broad spectrum of diseases.

HOW REGALIA WORKS

When treated with Regalia, the defense systems of strawberry plants 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.

Strawberry Yield
J. Mertley, et. al., University of Florida, FL



Treatments applied on 7 or 14 day intervals from Nov 21 to Feb 25.
Fruit harvested twice weekly from Dec 19 to Feb 27 (19 harvests).

Regalia®
Pre-Plant Dip

Standard
Program

FEATURES

- Broad-spectrum fungal and bacterial disease control
- Complex mode of action
- Rainfast in 1 hour
- 4-hour REI / 0-day PHI
- Tolerance exempt
- Approved for field and greenhouse applications
- NOP compliant and OMRI approved
- For ground and aerial applications
- Approved for foliar and soil applications

PRE-PLANT DIP FOR IMPROVED PLANT HEALTH

Nothing is more important than starting the season with clean, strong transplants. Regalia® is proven to help strawberry plants overcome the shock of transplanting, while also protecting the plants from soil-borne and foliar diseases. Independent field trials prove that Regalia treated transplants are healthier, with larger and better quality root systems.

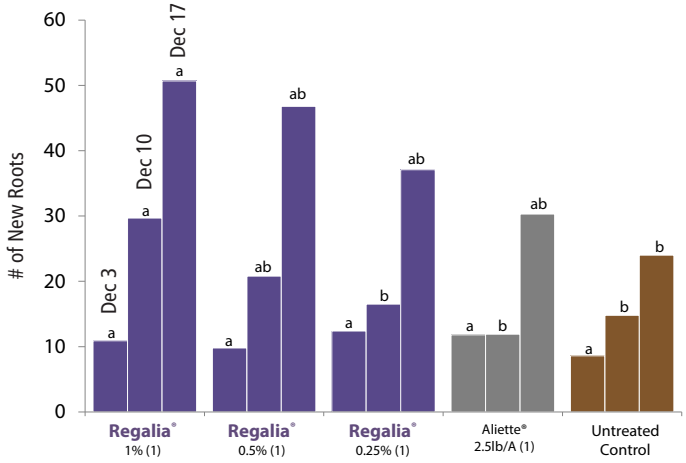
Field trials in Florida and California show that dipping strawberry transplants in a solution of Regalia (2 quarts per 100 gallons of water) prior to planting, results in larger plants and improved root quality. Research also shows that dipping transplants in Regalia prior to planting dramatically increases the number of new strawberry roots.

Regalia®
Pre-Plant Dip

Standard Program

Strawberry Root Growth (Pre-Plant Dip)

Florida Ag Research, Dover, FL

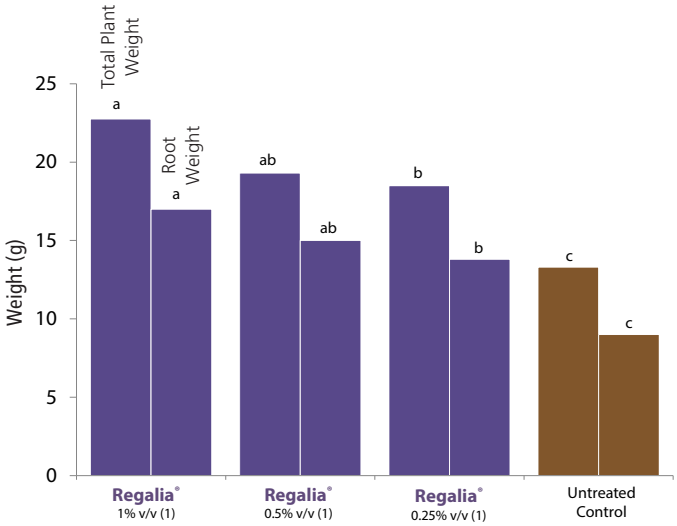


Treatments applied as whole plant dip prior to transplant on Nov 26.
Root growth evaluated on Dec 3, Dec 10, Dec 17.

Regalia, used as a pre-plant dip, reduces transplant shock and improves plant growth.

Strawberry Plant and Root Growth (Pre-Plant Dip)

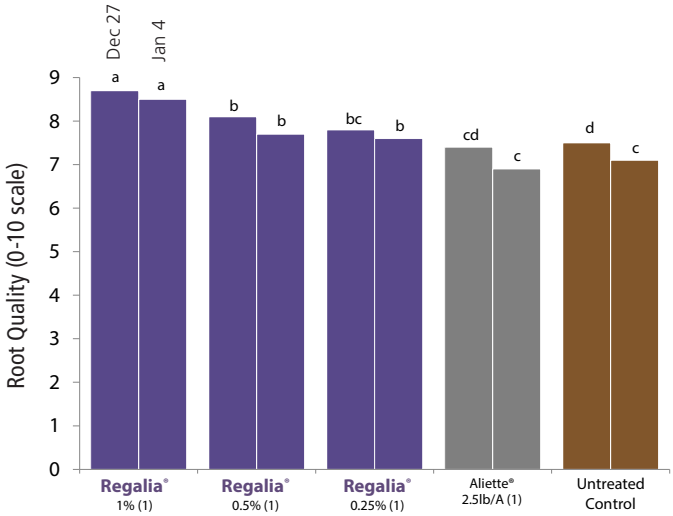
Pacific Ag Research, Guadalupe, CA



Treatments applied as whole plant dip prior to transplant on Nov 4.
Plant weight evaluated on Dec 4.

Strawberry Root Quality (Pre-Plant Dip)

Florida Ag Research, Dover, FL



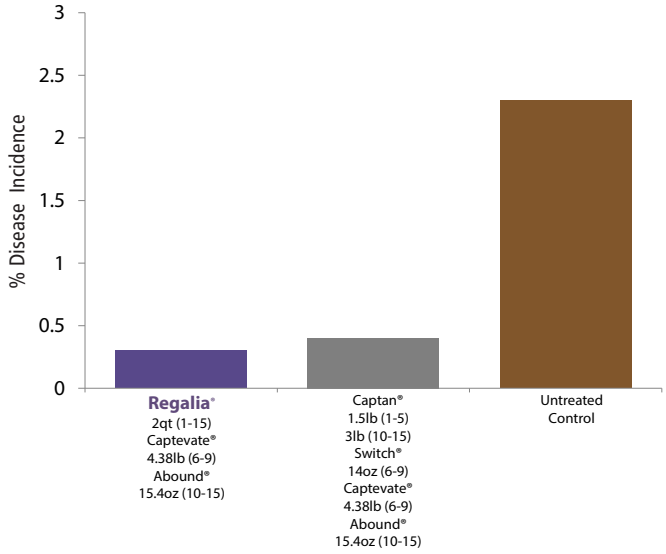
Treatments applied as whole plant dip prior to transplant on Nov 26.
Root quality evaluated on Dec 27 and Jan 4.

BOTRYTIS & ANTHRACNOSE FRUIT ROTS

Regalia is a proven component in Botrytis and Anthracnose Fruit Rot management programs. Historically, growers have used Captan® to control fruit rots, but growers often mix or rotate Captan with other classes of fungicides for more effective control. Regalia improves the effectiveness of Captan control programs.

Anthracnose Fruit Rot on Strawberry

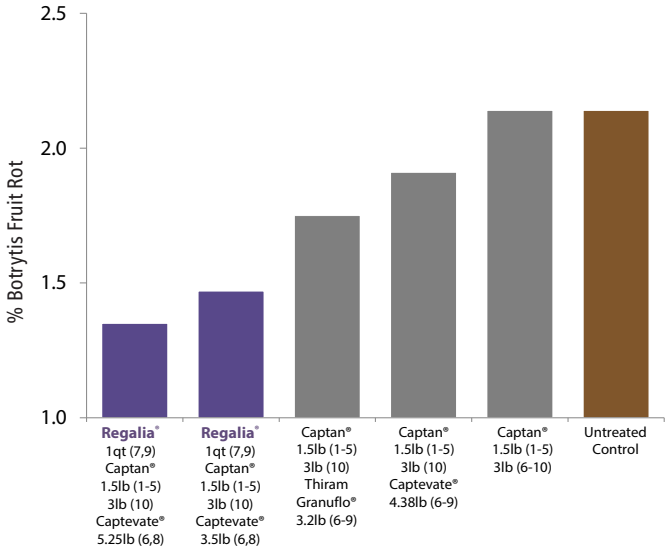
J. Mertley, et. al., University of Florida, FL



Treatments applied weekly from Dec 19 to Mar 24 (15 applications).
Disease observations recorded at harvest.
Fruit harvested twice weekly from Jan 13 through Apr 3 (24 harvests).

Botrytis Fruit Rot on Strawberry

J. Mertley, et. al., University of Florida, FL



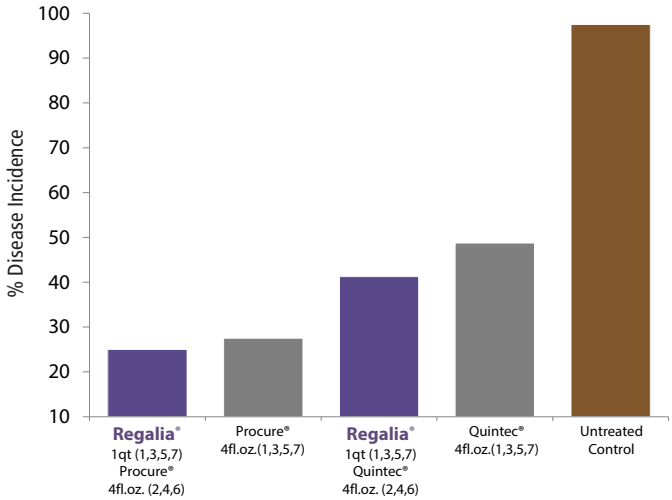
Treatments applied on 1= Dec 23, 2= Dec 30, 3= Jan 6, 4= Jan 13, 5= Jan 20, 6= Jan 27, 7= Feb 3, 8= Feb 10, 9= Feb 17, 10= Feb 24.
Disease observations recorded at harvest.
Fruit harvested twice weekly from Jan 19 through Mar 16 (17 harvests).

POWDERY MILDEW

Other fungicides commonly used to control Powdery Mildew on strawberries are known to have a high resistance risk and should be rotated with other chemistries in order to manage resistance. Regalia provides a new mode of action to combat resistance. New field research shows that Regalia provides improved disease control when alternated with Procure® or Quintec®.

Powdery Mildew on Strawberry

Pacific Ag Research, San Luis Obispo County, CA



Treatments applied 7 times on 1=Mar 23, 2=Mar 30,3= Apr 6, 4= Apr 13, 5= Apr 20, 6= Apr 27, 7= May 4.
Disease evaluated on May 10.

LABELED DISEASES

- Anthracnose
- Botrytis
- Powdery Mildew

COMPATIBILITY AND RESISTANCE MANAGEMENT

Many fungicides have a high risk of resistance, but this risk is extremely low with Regalia®. Regalia is compatible with other fungicides such as Pristine®, Switch®, Captan®, Elevate®, Scala®, and many other fungicides. If compatibility with another product is unknown, a jar test should be conducted.

SHORT REI AND PHI

Regalia carries a re-entry interval (REI) of only 4 hours, so workers can get back in the field quickly. With a 0 day pre-harvest interval (PHI), growers can now protect crops until harvest (see chart).

Product	Anthracnose	Botrytis	Powdery Mildew	PHI (days)	REI (hours)	Resistance Risk
REGALIA®	◆	◆	◆	0	4	**Low**
PRISTINE®	◆	◆	◆	0	12	High
SWITCH®	◆	◆	◆	0	12	Medium
CAPTAN®	◆	◆		0	24	Low
CAPTEVATE®	◆	◆		0	24	Medium
ELEVATE®		◆		0	12	Low-Med
SCALA®		◆		1	12	Medium
TOPSIN® M		◆	◆	1	24	High
PROCURE®			◆	1	12	Medium
QUINTEC®			◆	1	12	Medium
RALLY®, NOVA®			◆	0	24	Medium

BEST USE RECOMMENDATIONS

For best results, use Regalia as a preventative treatment. For maximum disease control, begin applications prior to or at the first sign of disease pressure. Apply at 7–14 day intervals to protect new growth. Additional treatments are recommended depending on weather and disease pressure.

The general recommendation for use of Regalia to control foliar fungal and bacterial diseases is to apply 1–2 quarts per acre in a rotational or tank mix program with another fungicide. Regalia can be applied in up to 200 gallons of water per acre.

Pre-Plant Dip

Recommended use rate is a 0.5% v/v (2 quarts Regalia in 100 gallons of water). Apply as a pre-plant dip to strawberry plants, roots, and crowns for 5 minutes. Treat plants immediately prior to planting.

Powdery Mildew

Apply Regalia at 1–2 quarts per acre in rotation or tank mix with a fungicide labeled for Powdery Mildew.

Anthracnose Fruit Rot and Botrytis Fruit Rot

Apply Regalia at 1–2 quarts per acre in a tank mix with another fungicide labeled for control of Anthracnose and/or Botrytis.

Always read and follow label directions.

CAN BE USED IN ORGANIC PRODUCTION

OMRI LISTED

FOR ADDITIONAL INFORMATION, CONTACT YOUR LOCAL RETAILER
OR CONTACT MARRONE BIO INNOVATIONS:
Phone 530-750-2800 • Toll Free 877-664-4476 • Email regalia@marronebio.com

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