

What is **GALLTROL** and how does it work to prevent Crown Gall?

- GALLTROL is a pure culture of Agrobacterium radiobacter (Strain K84) grown under scientifically controlled conditions to maximize bacterial vigor and numbers. Each plate of GALLTROL contains 120 billion freshly grown, active bacterial cells.
- GALLTROL prevents crown gall by colonizing fresh wounds, thereby blocking attachment sites for the gall-inducing pathogen.
- GALLTROL bacteria also produce antibiotics toxic to the pathogen
- GALLTROL can be used on cuttings, liners, seedlings, bare-root stock, and seeds.

"Galltrol has been our chosen product since 1985."

- *Sierra Gold Nurseries, Yuba City, CA.*
Large volume supplier of quality nut and fruit trees.

"Galltol is an important part of our crown gall prevention program. We normally request that our nursery trees be treated upon digging and we treat them again just prior to planting."

- *Chuck Crain, Crain Orchards, Inc.,*
California walnut growers in Glenn,
Butte and Tehama Counties.

"In the past 8 years, over two million cuttings of euonymous, rose and holly protected with Galltrol, showing excellent prevention of crown gall."

- *Conard - Pyle Co. West Grove, PA.*
Volume supplier of quality ornamentals.



For prevention and eradication of crown gall, use **GALLTROL and **GALLEX** by AgBioChem, Inc.**

AgBioChem, Inc.

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Customer Service – 530.586.1561

GALLTROL

With over 30 years of proven performance,

Galltrol is the most effective product for prevention of crown gall disease.



GALLTROL

What is Crown Gall and what does it do to plants?



- Crown gall disease is a cancer that attacks susceptible plant species. The tumor-inducing pathogen, ***Agrobacterium tumefaciens***, is common in soils and infects plants via fresh wounds in crown, roots, and stems that occur in nurseries, production fields, and landscapes.
- Infected plant cells multiply and enlarge out of control. The expanding tumor destroys adjacent healthy tissues and prevents normal flow of water and nutrients.
- Growth and productivity decline until plant dies.
- Galls also provide points of entry for wood decaying fungi that destroy plant structural integrity.

The following plants are most susceptible to crown gall disease:

- Nut Crops– almond, walnut, filbert, pecan
- Pome Fruits– apple, pear
- Stone Fruits– cherry, peach, nectarine, plum, prune, apricot
- Small Fruits– grape, blueberry, blackberry, raspberry, boysenberry
- Ornamentals– rose, euonymous, holly, willow, poplar, clematis, gypsophila, etc.

GALLTROL Use Instructions

- The active ingredient is the cream-colored bacterial growth on the surface of the agar medium (99% a.i.) – not the agar



- Partially fill bucket, pan or spray tank with water (non-chlorinated).
- With gloved finger, wipe bacterial growth off agar surface and suspend in water. Alternatively, hold GALLTROL plate at 45 degree angle and, with fine water spray from “pistol type” nozzle, wash bacterial growth off into bucket. Discard agar along with plastic dish.
- If to be used as a spray, be careful not to break up agar medium.
- Fill bucket or spray tank to final treatment volume (labeled rate is bacterial growth from 1 plate per 1 gallon of water). One gallon of GALLTROL suspension will treat about 350 bare root trees of ½” diameter or thousands of cuttings.
- Do not mix more suspension than can be used in one day. Leftover suspension can be used as diluent for new batches.
- Stir or agitate suspension to assure dispersion.
- To maximize coverage of wounded plant parts, wash off soil or planting mix and let drip dry for a few minutes prior to treatment.
- Thoroughly spray, dip, or drench roots to “run-off”.
- Treat plants as soon as possible (not more than 8 hours) after each wounding event (e.g., cutting, digging, handling, grafting).
- Proceed to storage or planting.
- GALLTROL consists of freshly produced, live bacteria. Store in a standard refrigerator at about 40 degrees F
- Read GALLTROL label prior to use. Follow label instructions.

GALLEX



GALLEX is a ready-to-use flowable emulsion that eradicates existing galls.

GALLEX works by selectively penetrating and killing gall cells, but does not harm healthy tissues.

GALLEX Use Instructions

- Make first treatment during dormancy, spring, or early summer when rain is unlikely for several days.
- Remove soil from around underground galls by hosing away with water, compressed air, or by other means.
- Cut off the major portion of all galls larger than a baseball. Allow to dry one or more days before treatment.
- Shake GALLEX well before using. Do not dilute.
- Paint GALLEX onto gall and cut surfaces plus ½” of surrounding healthy bark.
- Allow treated galls below ground to dry one or more days before replacing soil.
- Examine after 4-6 months and re-treat if any live galls are found.
- Do not treat more than 50% of trunk or stem circumference in each treatment cycle.
- Read GALLEX label prior to use. Follow label instructions.