

Evaluation of OMRI-listed fungicides for disease management in small fruit crops

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List of products allowed for use in
organic crop production:

**Organic Materials Review
Institute: www.omri.org**



Fungicides on OMRI list:

Serenade, Kodiak (*Bacillus subtilis*)

Sonata, Yield Shield (*Bacillus pumilis*)

Mycostop Biofungicide (*Streptomyces griseoviridis*)

SoilGard 12G (*Gliocladium virens*)

Blight Ban A506 (*Pseudomonas fluorescens*)

PlantShield (*Trichoderma harzianum*)

Contans (*Coniothyrium minitans*)

Copper, Sulfur (multiple formulations)

Sporan EC (rosemary, clove, and thyme oil)

JMS Stylet Oil (paraffinic oil)

Neem Oil (azadirachtin)

Kaligreen, Milstop (potassium bicarbonate)

Lime Sulfur (calcium polysulfide)

Oxidate (hydrogen peroxide)

**Biological
control agents**

Elementals

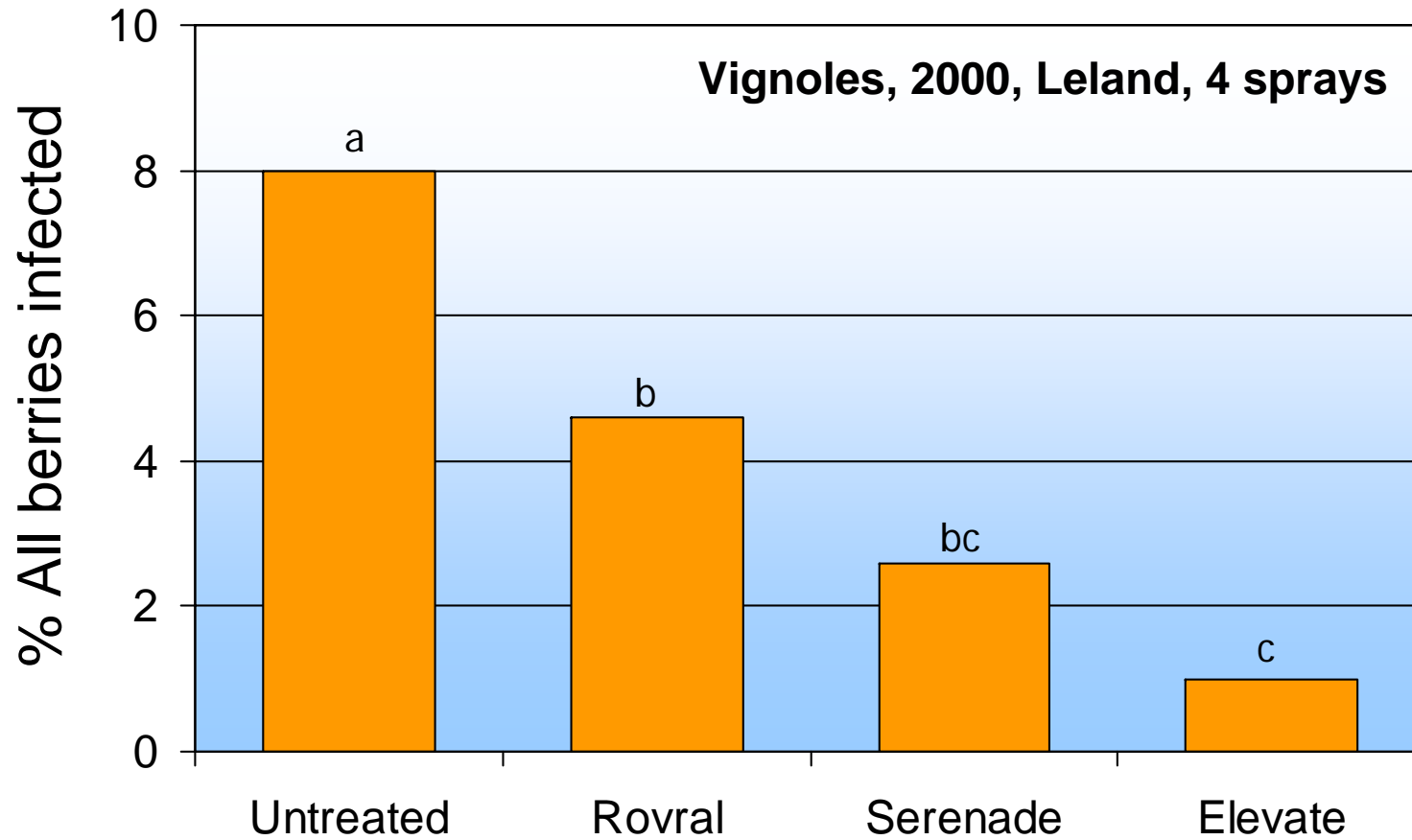
**Oils / Plant
extracts**

Salts

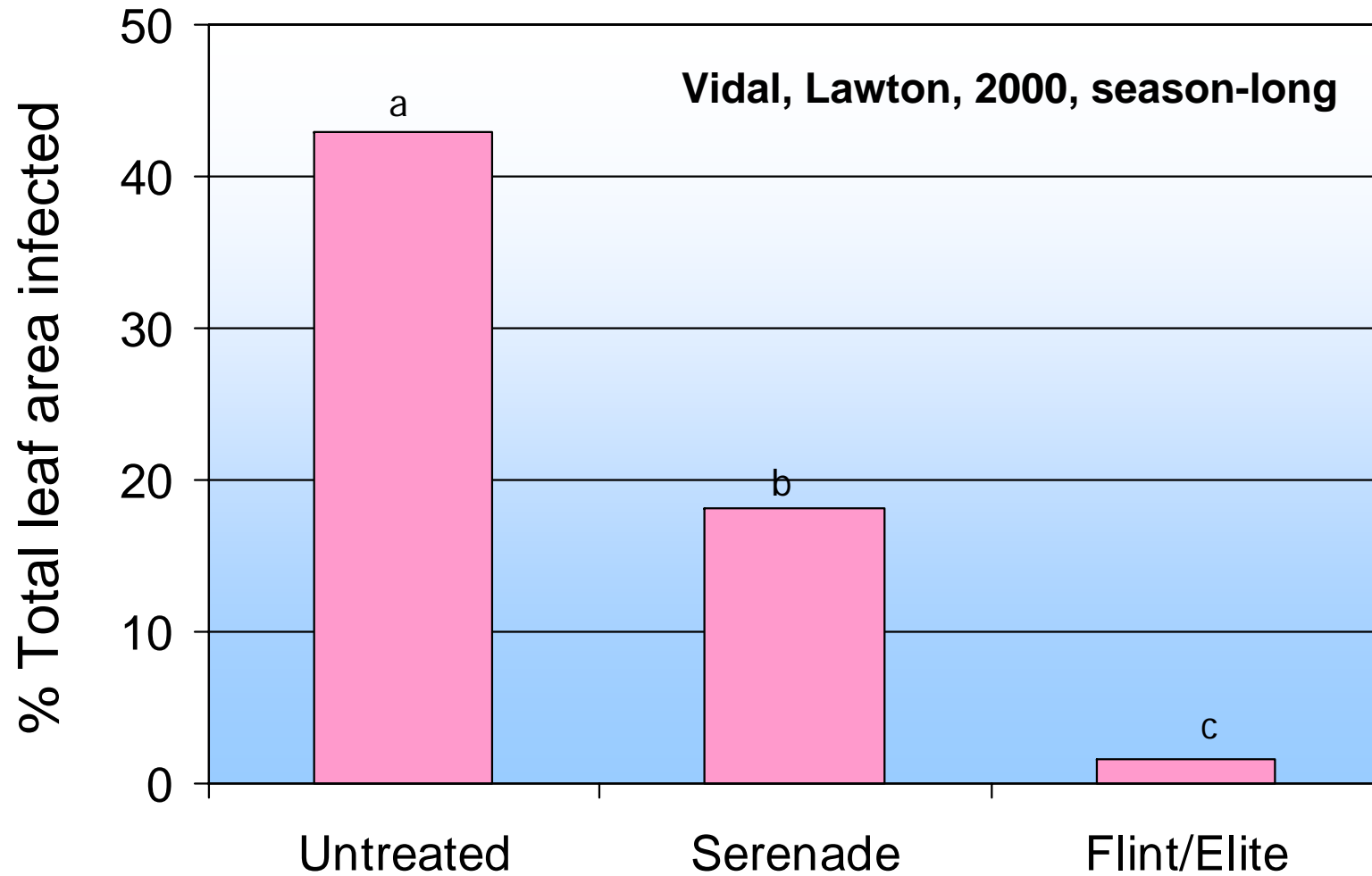
Other



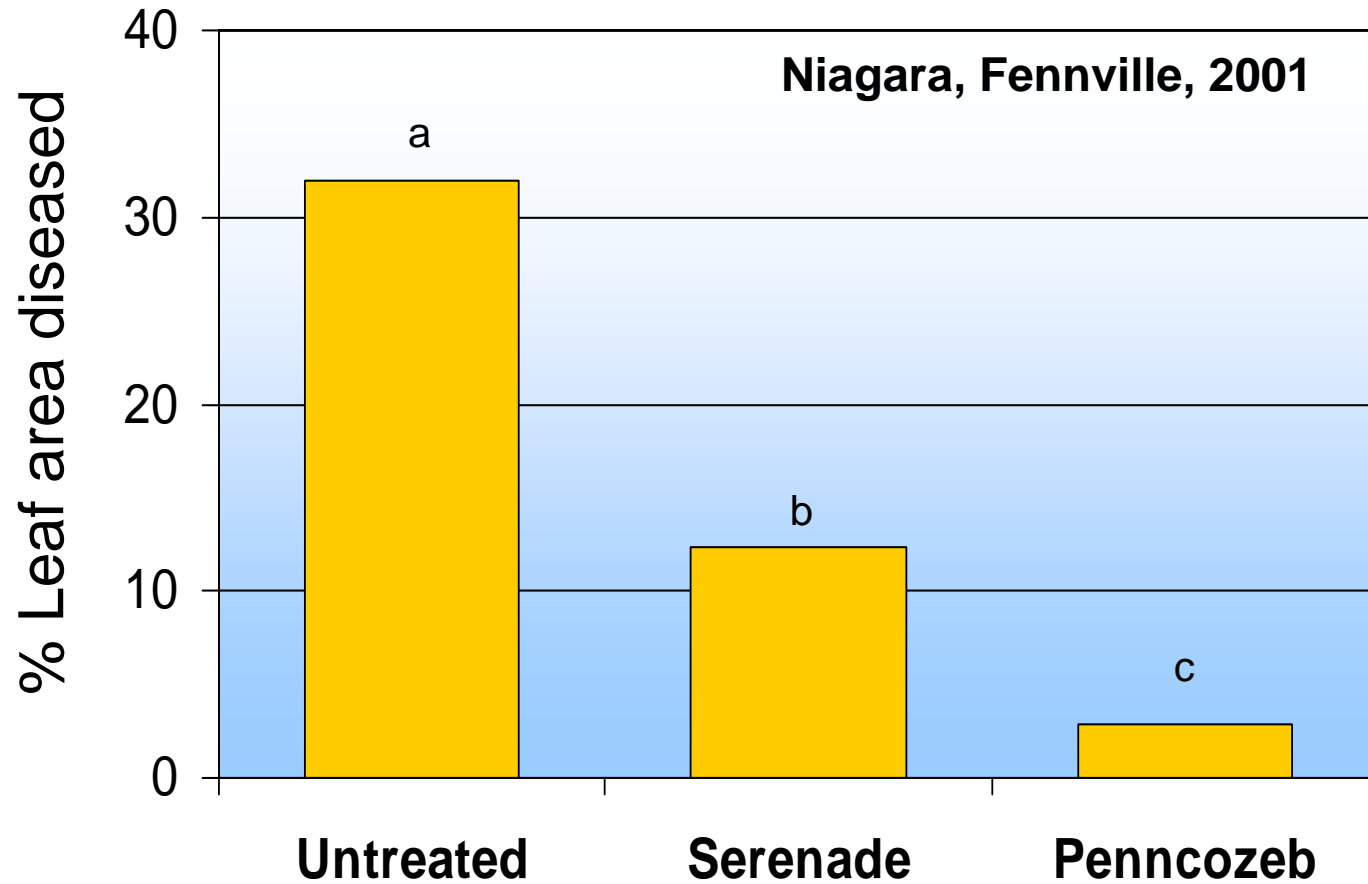
Botrytis bunch rot severity in grapes



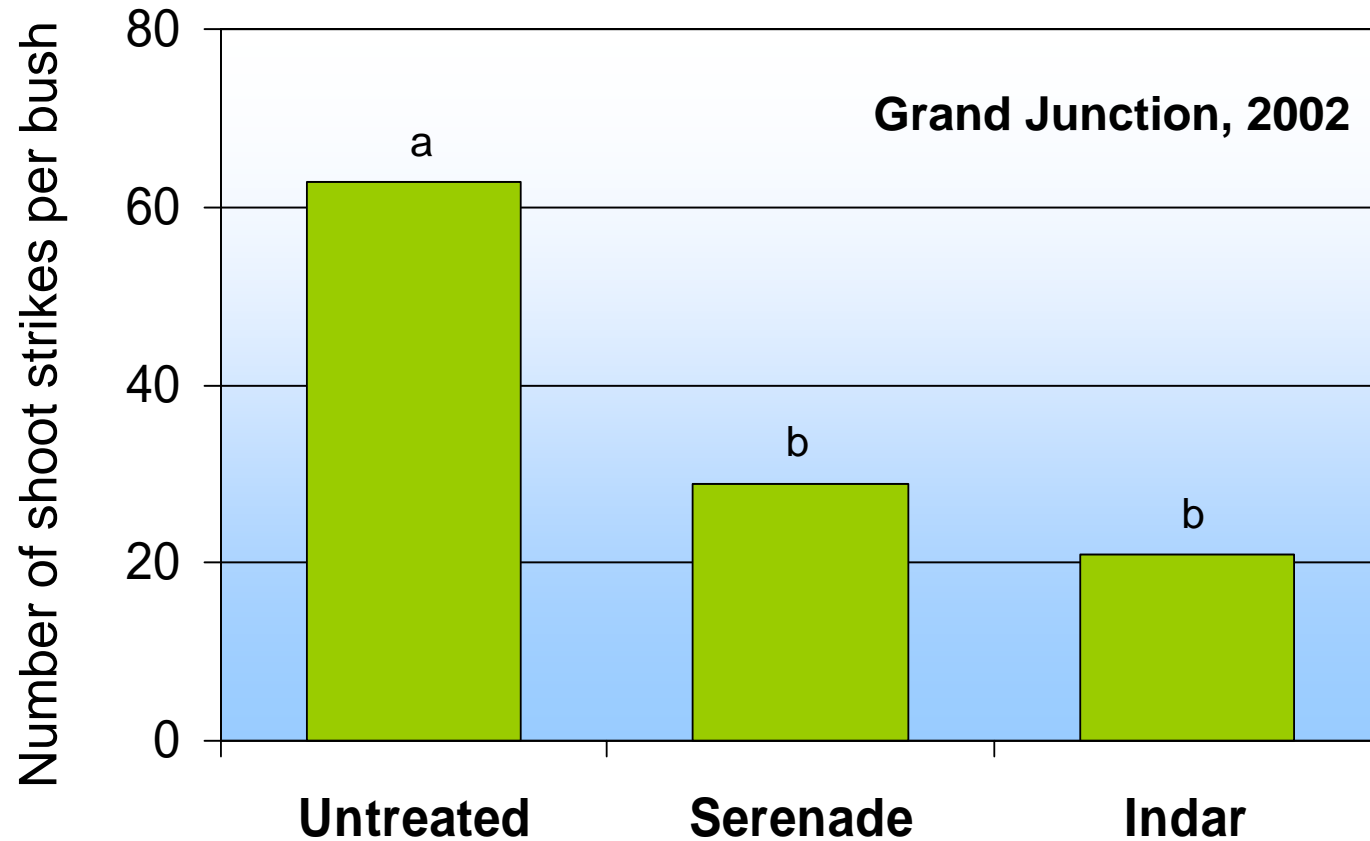
Powdery mildew severity in grapes



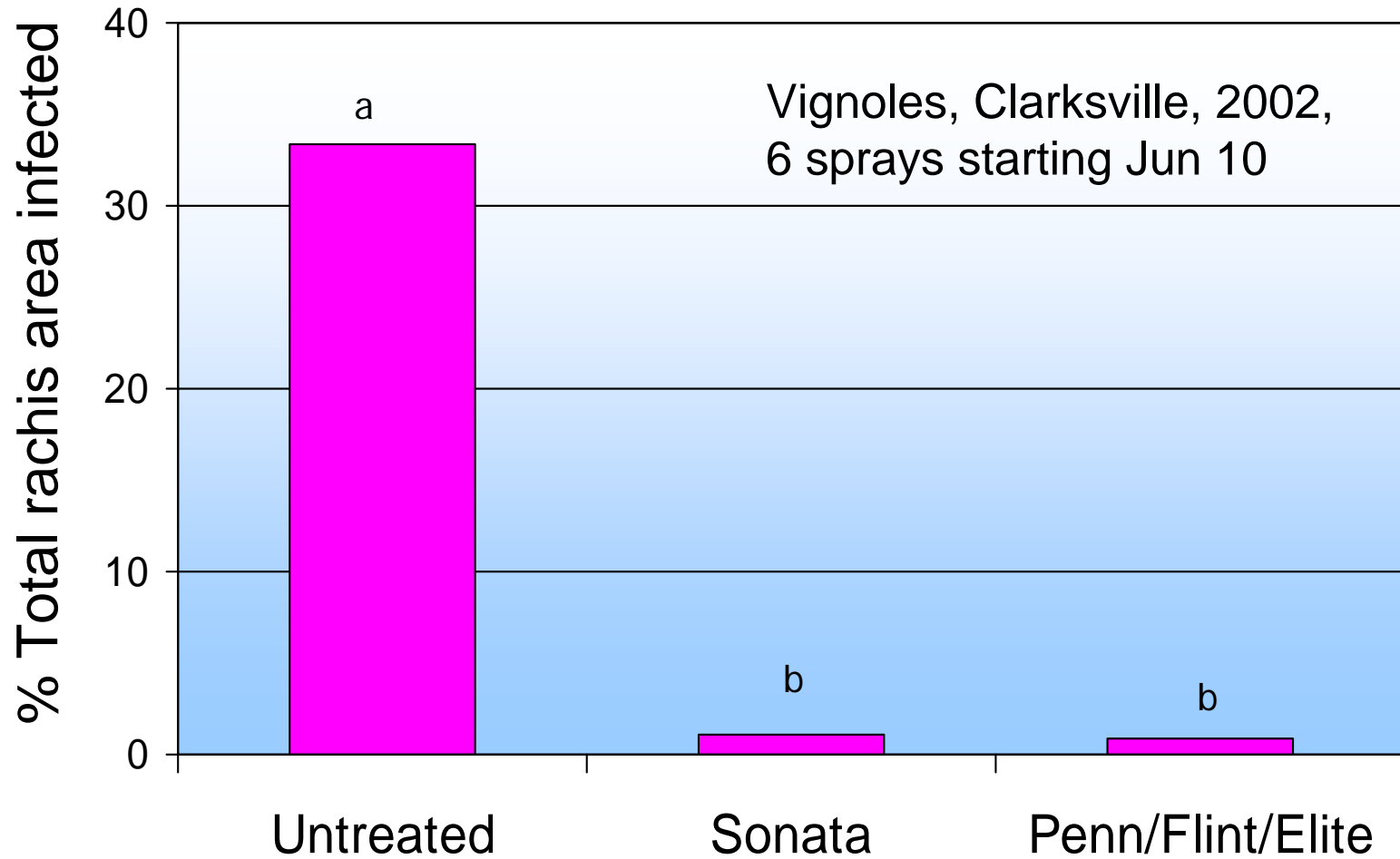
Downy mildew severity in grapes



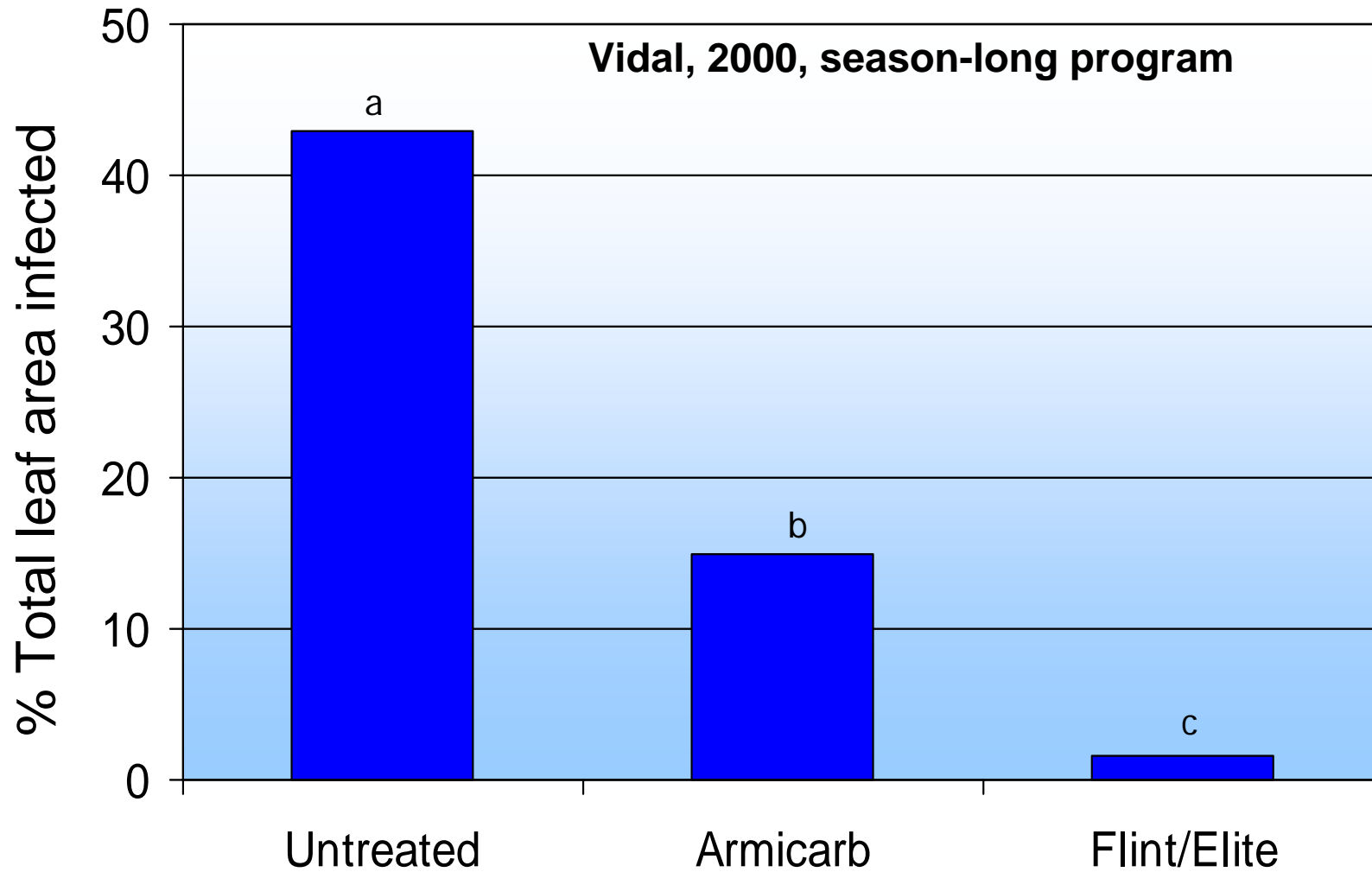
Mummy berry shoot strike incidence in blueberries



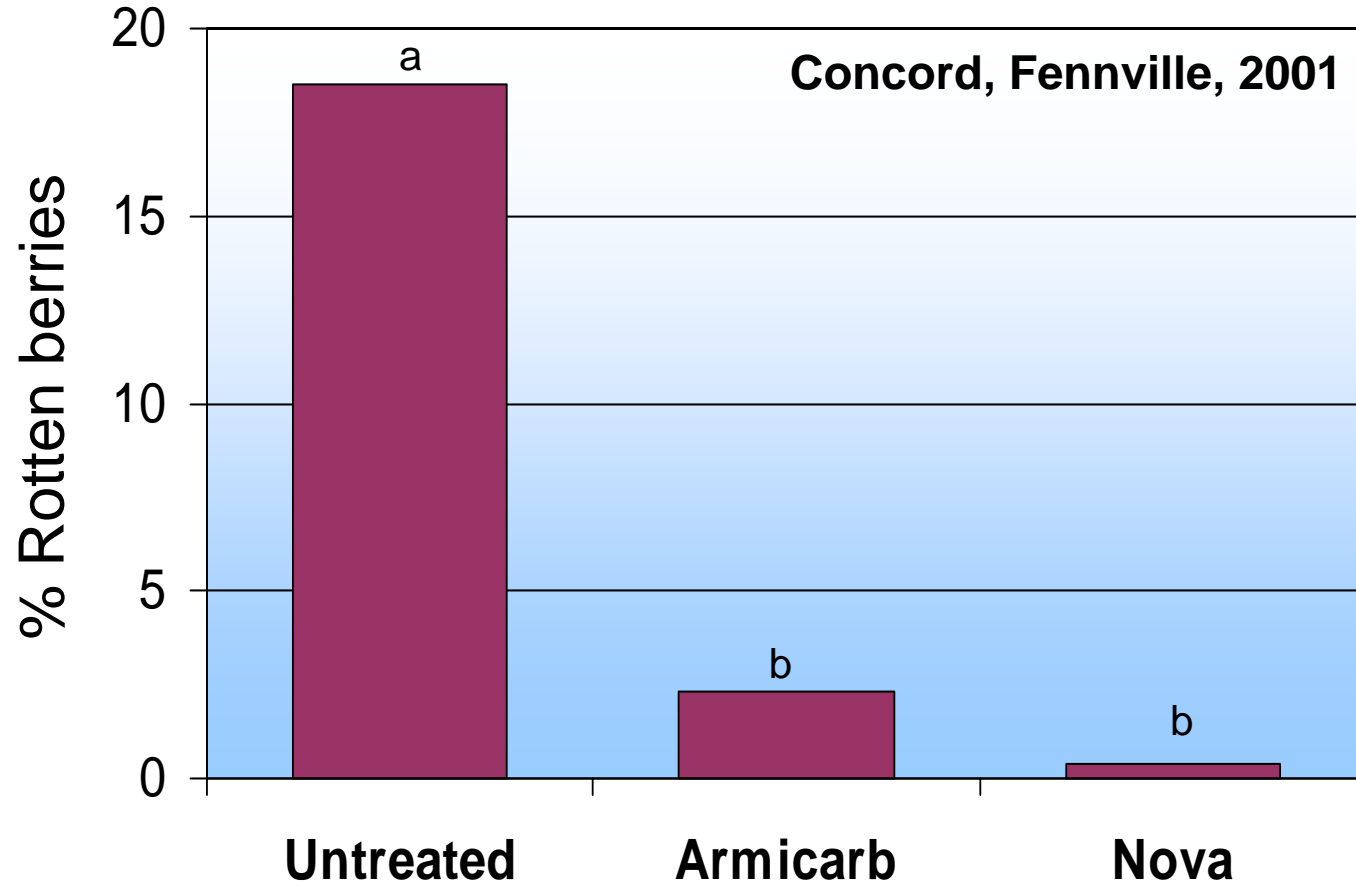
Powdery mildew severity in grapes



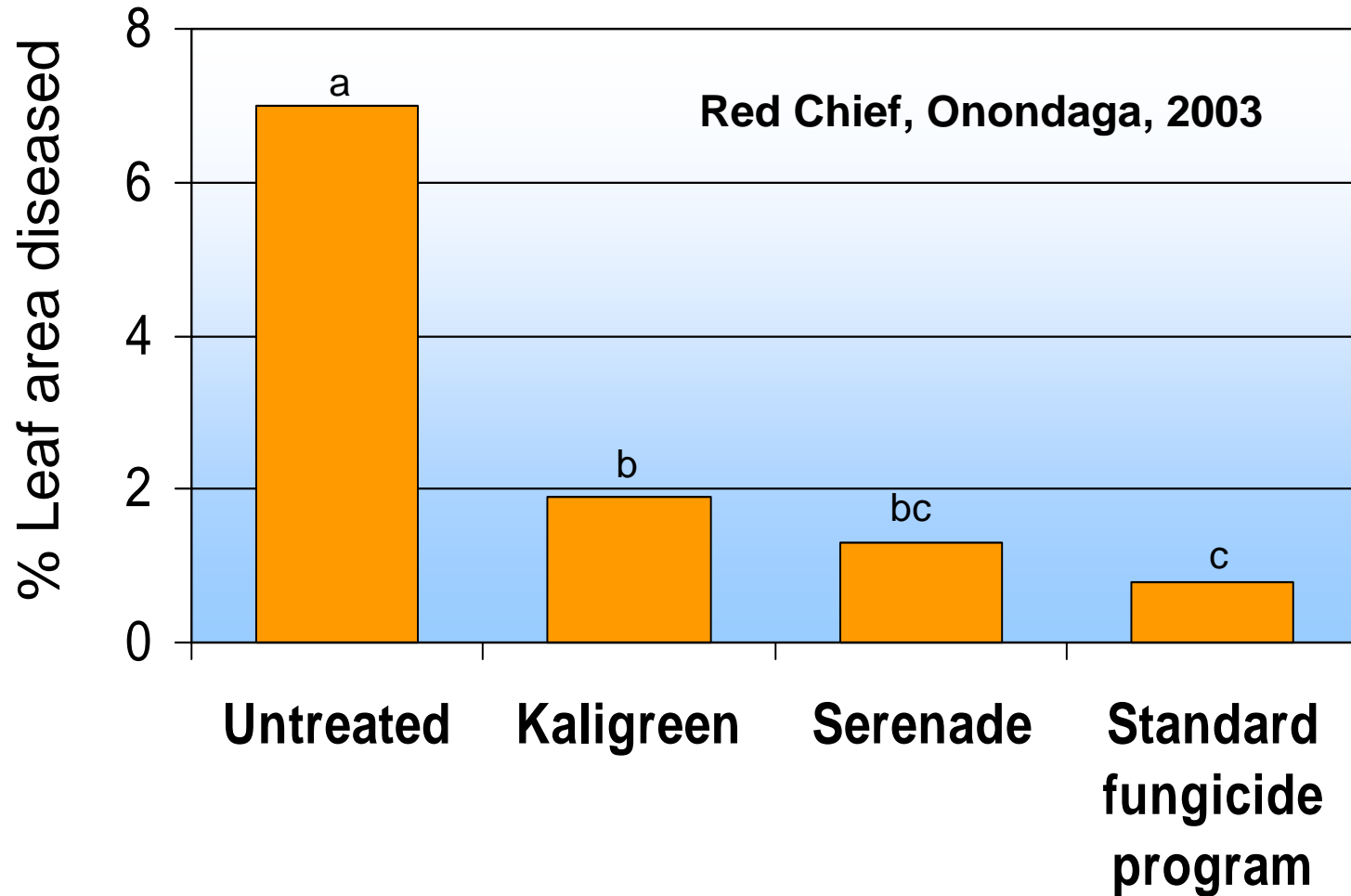
Powdery mildew severity in grapes



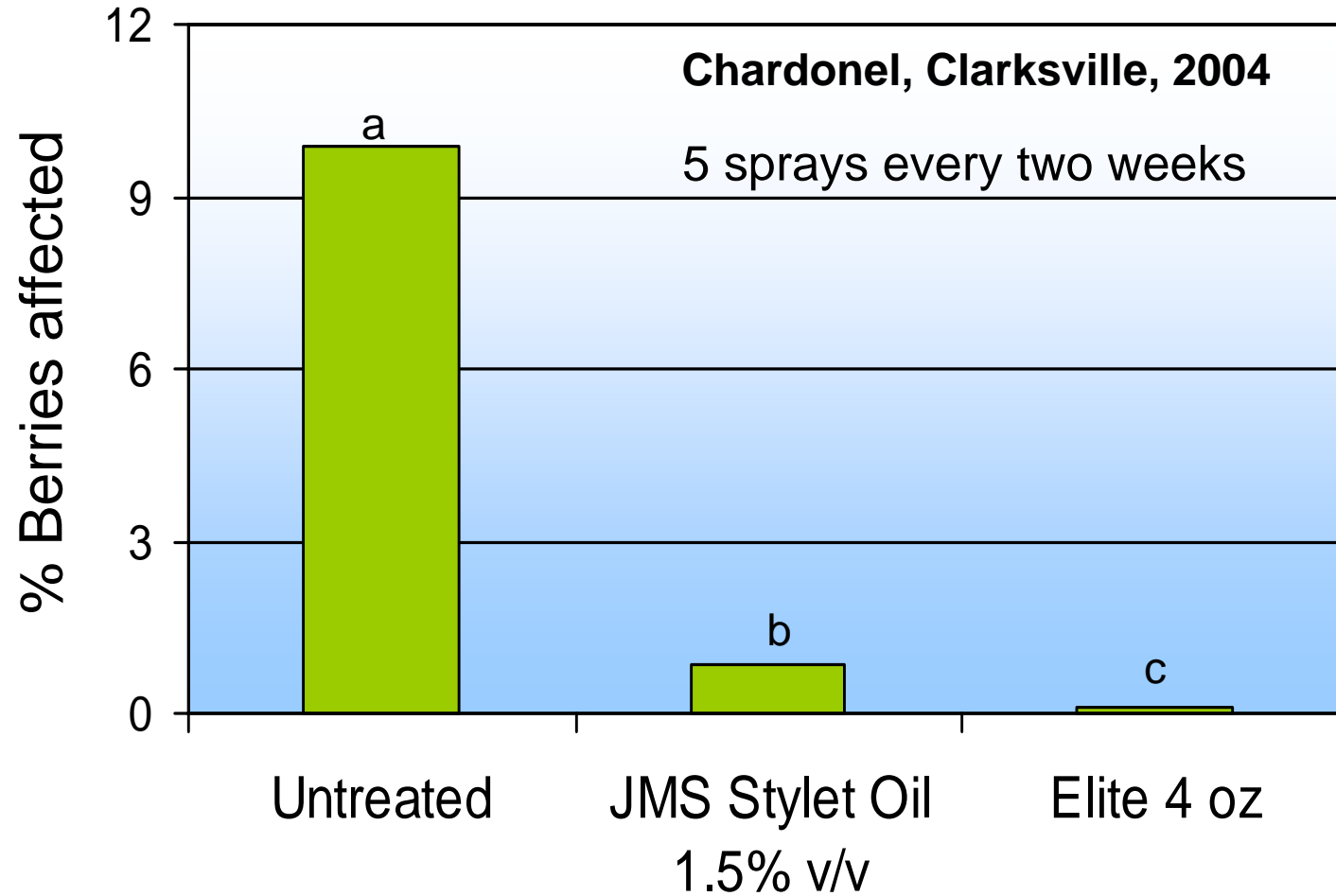
Black rot severity in grapes



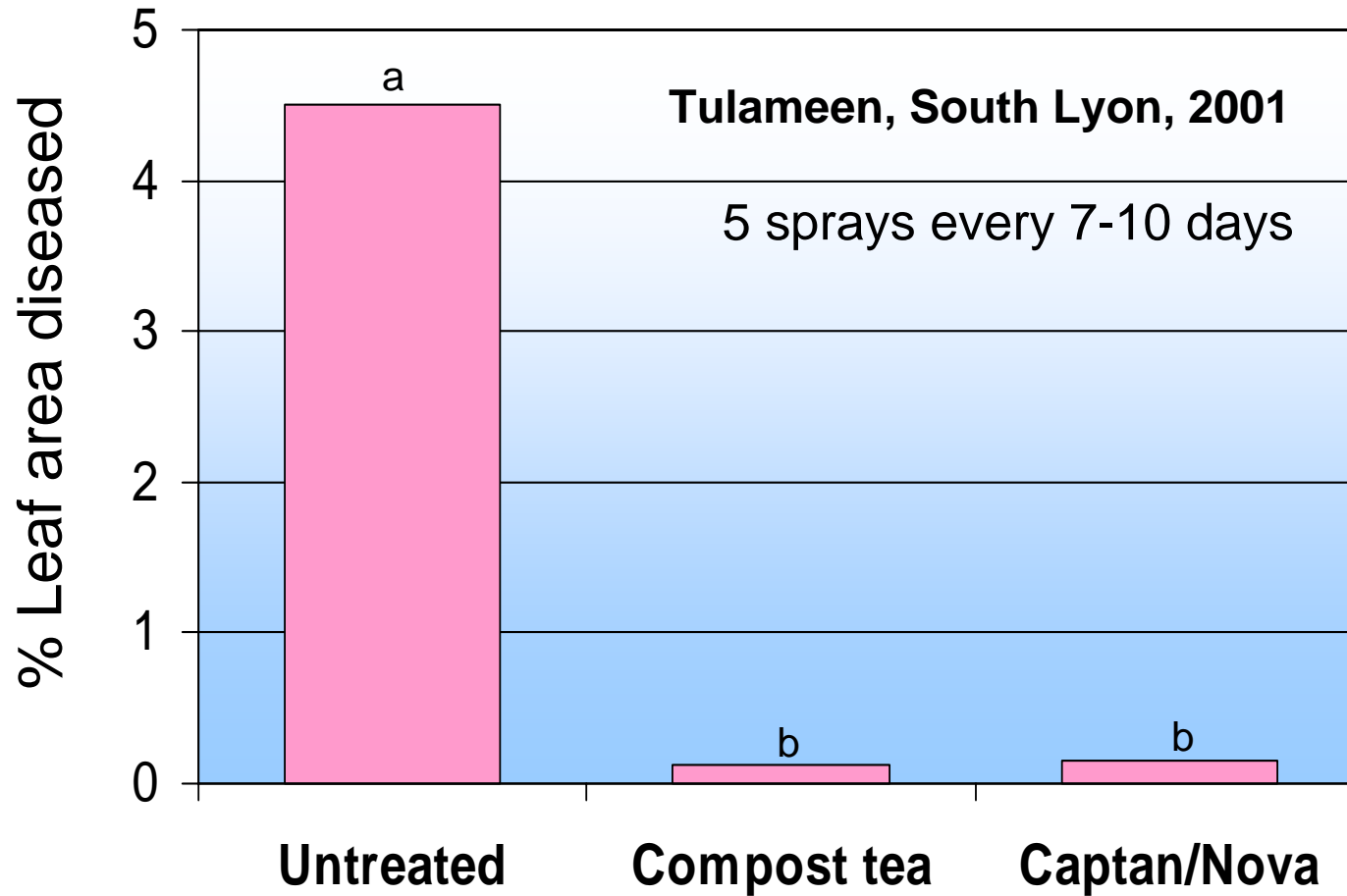
Leaf spot severity in strawberries



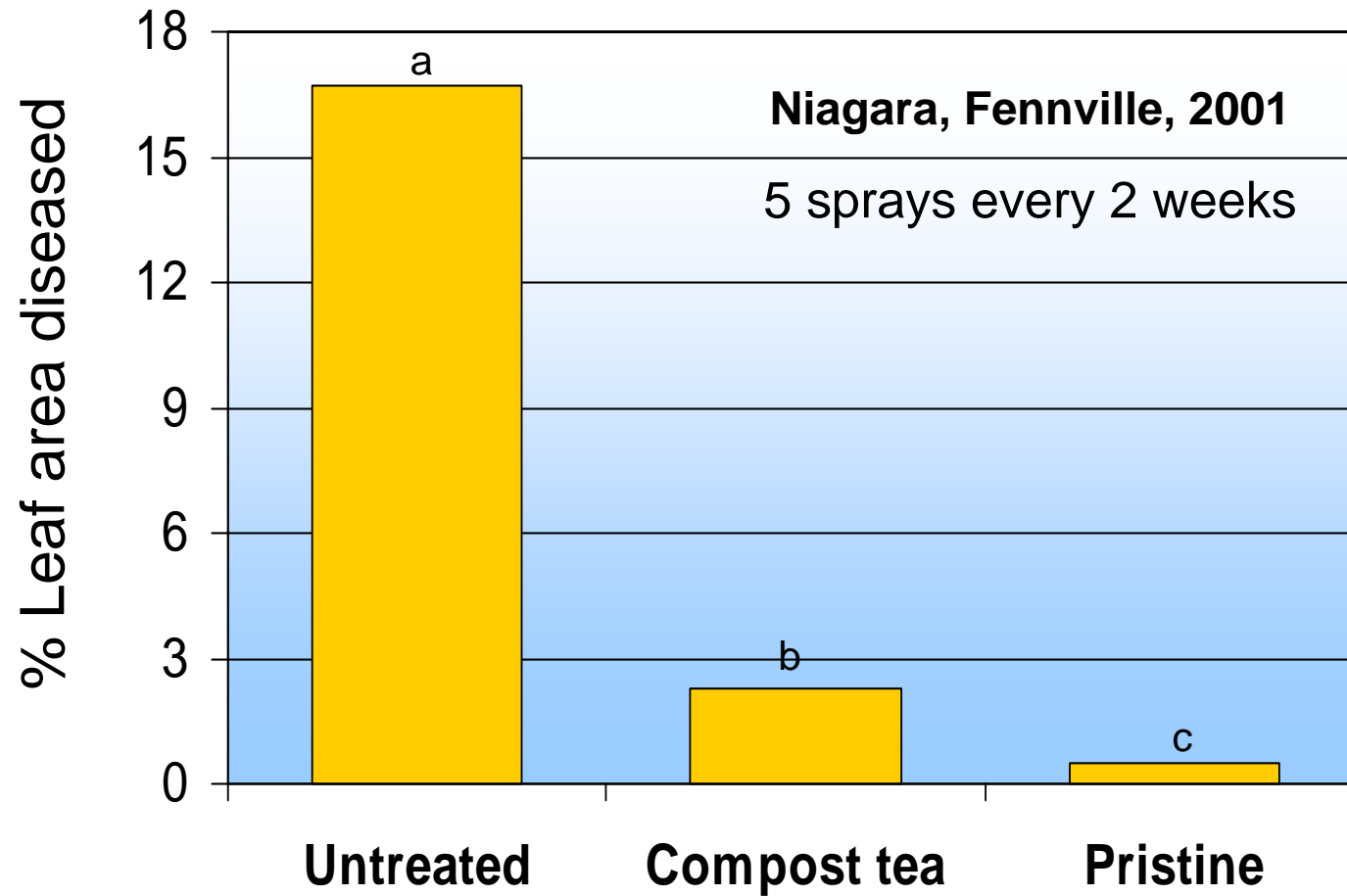
Powdery mildew severity in grapes



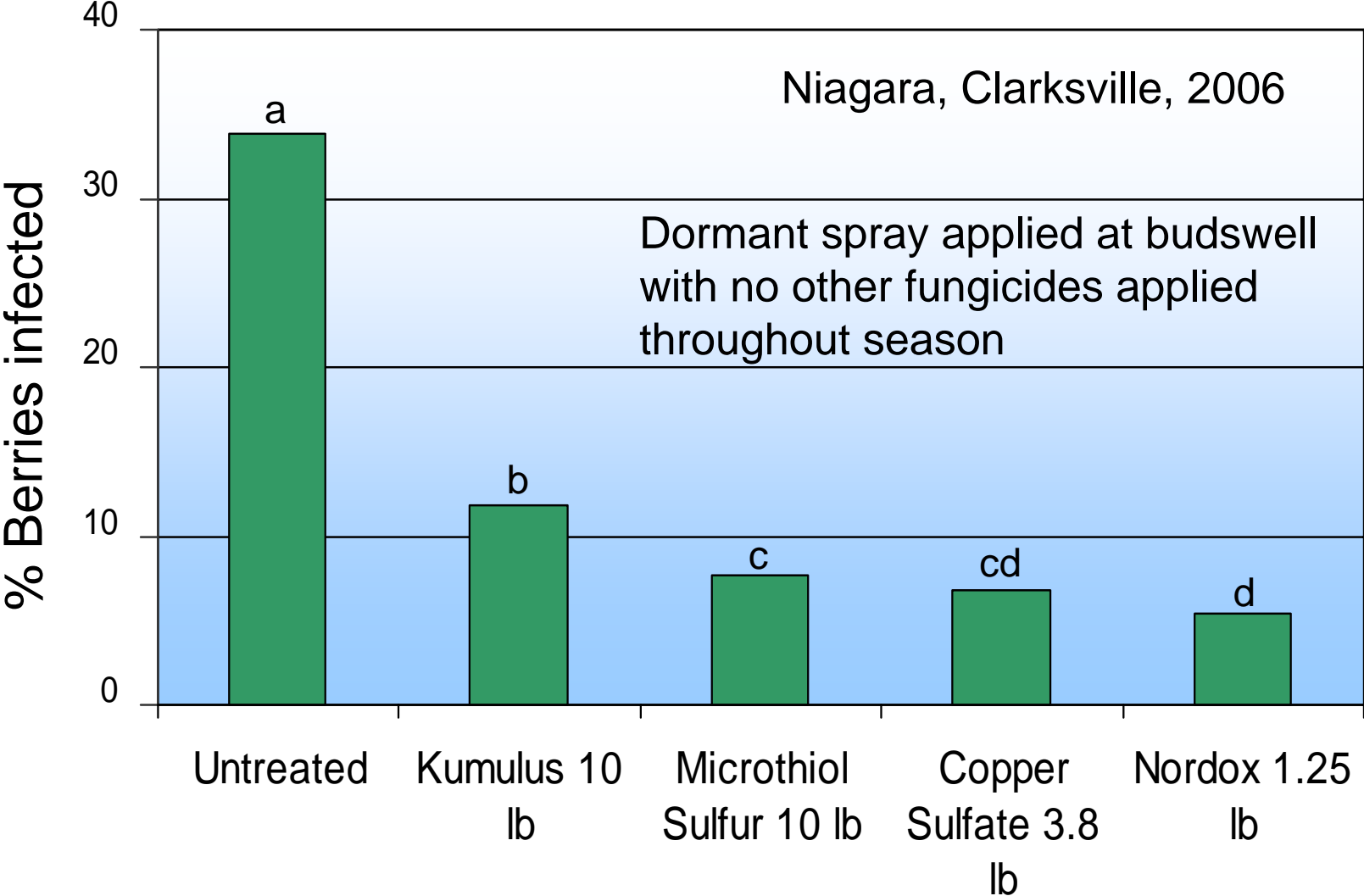
Leaf spot severity in raspberries



Downy mildew severity in grapes



Effect of single dormant sprays on Phomopsis



Conclusions:

- OMRI-approved fungicides work but may not be as effective as conventional fungicides, especially under high disease pressure
- They are mostly protectants: need good coverage and are subject to wash-off by rain
- Compost tea is promising but needs more research and standardization
- Dormant sprays can reduce the need for seasonal copper or sulfur sprays

Conclusions:

- More efficacy trials are needed against a wide variety of diseases
- Disease monitoring is important to decide whether and when sprays are needed
- A correct diagnosis is critical for good disease control
- Cultural and other disease management strategies need to be utilized before relying on fungicides