

A photograph of a tree nursery or orchard in a dormant state. The trees are bare, with no leaves, and are arranged in neat rows. The ground is a mix of brown soil and sparse green grass. The sky is a clear, pale blue. The text is overlaid on the center of the image.

# **CROWN GALL TREATMENTS**

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# Evaluate Effectiveness of Crown Gall Treatments

- Planted bare root Paradox trees
- Artificially wounded and infected injuries
- Grew 5 galls per tree, 12 inches apart, NESW
- Treated 88 baseball sized galls
- Breakthru, Bleach, Gallex, Heat, UN32 and Diesel
- Surgery vs no surgery







<b>Treatment</b>	<b>Surgery Ring/Removal</b>	<b>Live Galls<sup>1</sup> 12/29/99</b>	<b>Live Galls 7/14/00</b>
1. Breakthru® 1%	Yes	0	2
2. Bleach 10%	Yes	1	6
3. Breakthru® 1% + Bleach 10%	Yes	0	1
4. Breakthru® 1% + Bleach 10%	No	7	8
5. Gallex®	Yes	0	0
6. Gallex®	No	8	8
7. Blowtorch	Burned	0	0
8. UN32	Yes	0	0
9. #2 Diesel	Yes	0	1
10. None/Control	Yes	0	0
11. None/Control	No	8	8

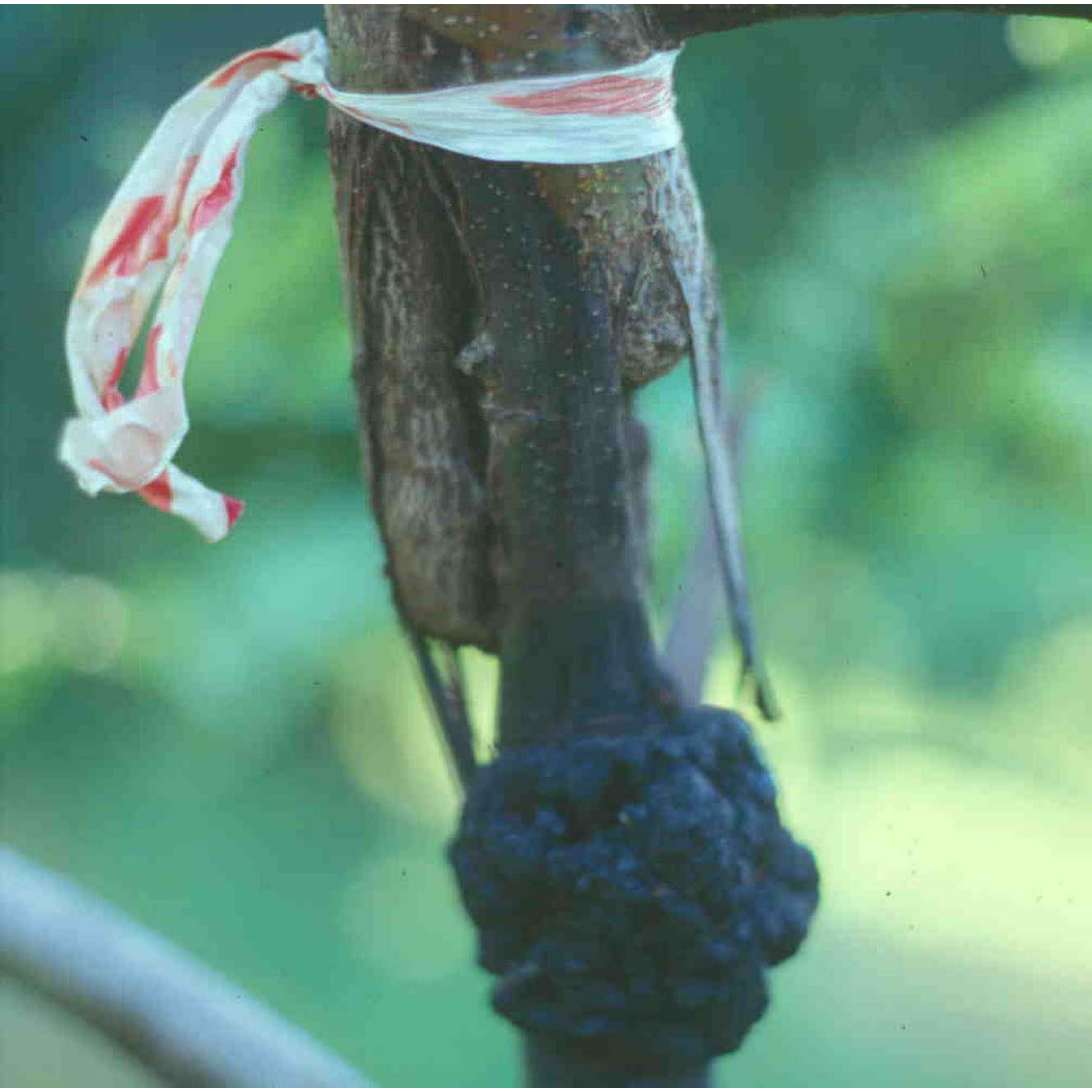
Figure 1. Technique and material evaluation for Crown Gall control. Galls were initially treated 7/14/99. Breakthru®, Gallex®, Bleach and Diesel were reapplied 7/29/99 to ensure good material coverage. Galls were rated 12/29/1999 and again 7/14/2000.

<sup>1</sup>Numbers represent the number of live galls compared to the 8 galls initially treated.













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# Summary

- Tissue around the gall is critical to treat
- Chemical treatments alone were not effective
- Clean surgery is effective
- Killing surrounding bark with heat is effective
- Surgery plus heat is the preferred method
- Get them when they're small

