



FROST BLANKETS FOR TENDER VINIFERA

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WHAT ARE FROST BLANKETS?

Frost Blanket
Polyester material



Floating Row Cover
Polypropylene material



HOW DO THEY WORK?

- Trap geothermal heat
 - Physical barrier
- Vines covered approximately mid-November
 - Couple hard frosts
 - No green vegetation
- Closer to ground better
 - ~36" off the ground





PROS AND CONS

Pros

- Frost blanket retains heat
 - Warmer than ambient
- Improved bud survival
 - Covered vs Uncovered
- Frost protection in spring
 - Pull cover down as needed
- Pile on the snow
 - Creates greater insulation

Cons

- Cost
 - About several thousand/acre
- Labor intensive
 - Fall pruning
 - Laying blanket
- Temp inversion may be less
 - Quebec 20° difference
 - E. Ontario 5°-10° difference



PREVIOUS RESEARCH

- Quebec
 - Alternative to burying vines
 - Increased use, possible higher yields
- Mostly hybrids
 - Vidal, Baco
 - Few vinifera
- Large temp inversion
 - -22F ambient
 - +5F under blankets
- Eastern Ontario
 - Alternative to burying vines
 - Alternative to wind machines
- Vinifera vines
 - Chardonnay
 - Pinot Noir
- Moderate temp inversion
 - -4F to – 13F ambient
 - +5F to -4F under blankets

PRELIMINARY WORK IN ENY

- Single site Dutchess County
- 4 rows 3 varieties (Chard, Merlot, Pinot)
 - Plus single row CF
- 6 temp loggers/row
 - 1 soil level, 1 bud level
 - 3 panels (2 ends, 1 middle)
 - Record every 2 hrs (last until March)
- No data yet
 - Remove and download
 - Late Feb early March?



WHAT'S NEXT?

- Evaluate data collected
 - Warm winter
 - Still valuable info
 - Compare to E. Ontario
- Continue this work
 - Apply for grant funding
- Expand study
 - Additional sites
 - Bud mortality
 - Track crop?



SUMMARY

- Potential winter protection
 - 5° to 10° Inversion
- Weigh costs
 - Blankets vs Grape hoe
 - 1°bud crop vs 2°bud crop
 - Improved yields?
 - Labor (pruning bad year, laying blankets)



QUESTIONS?

