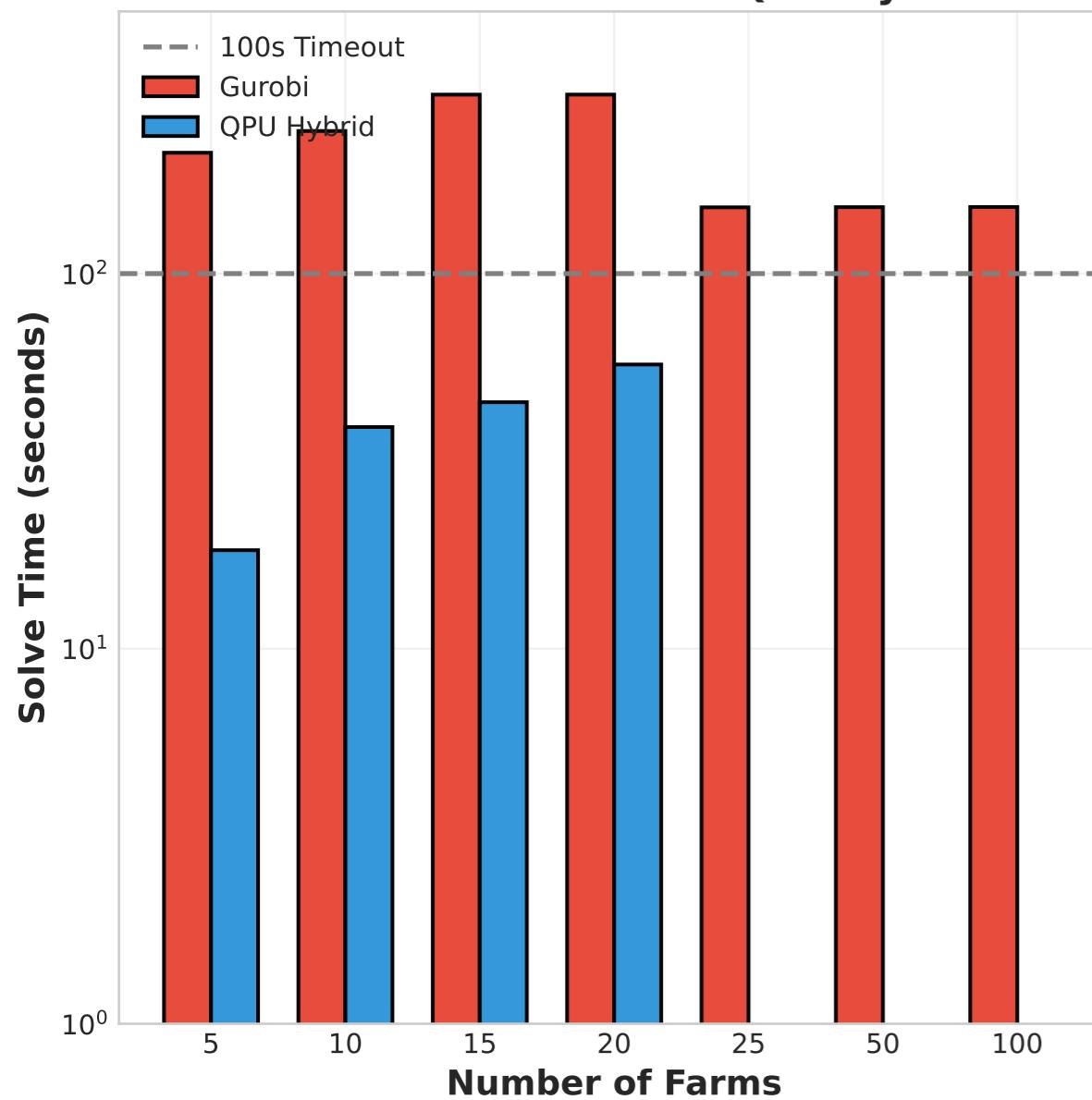


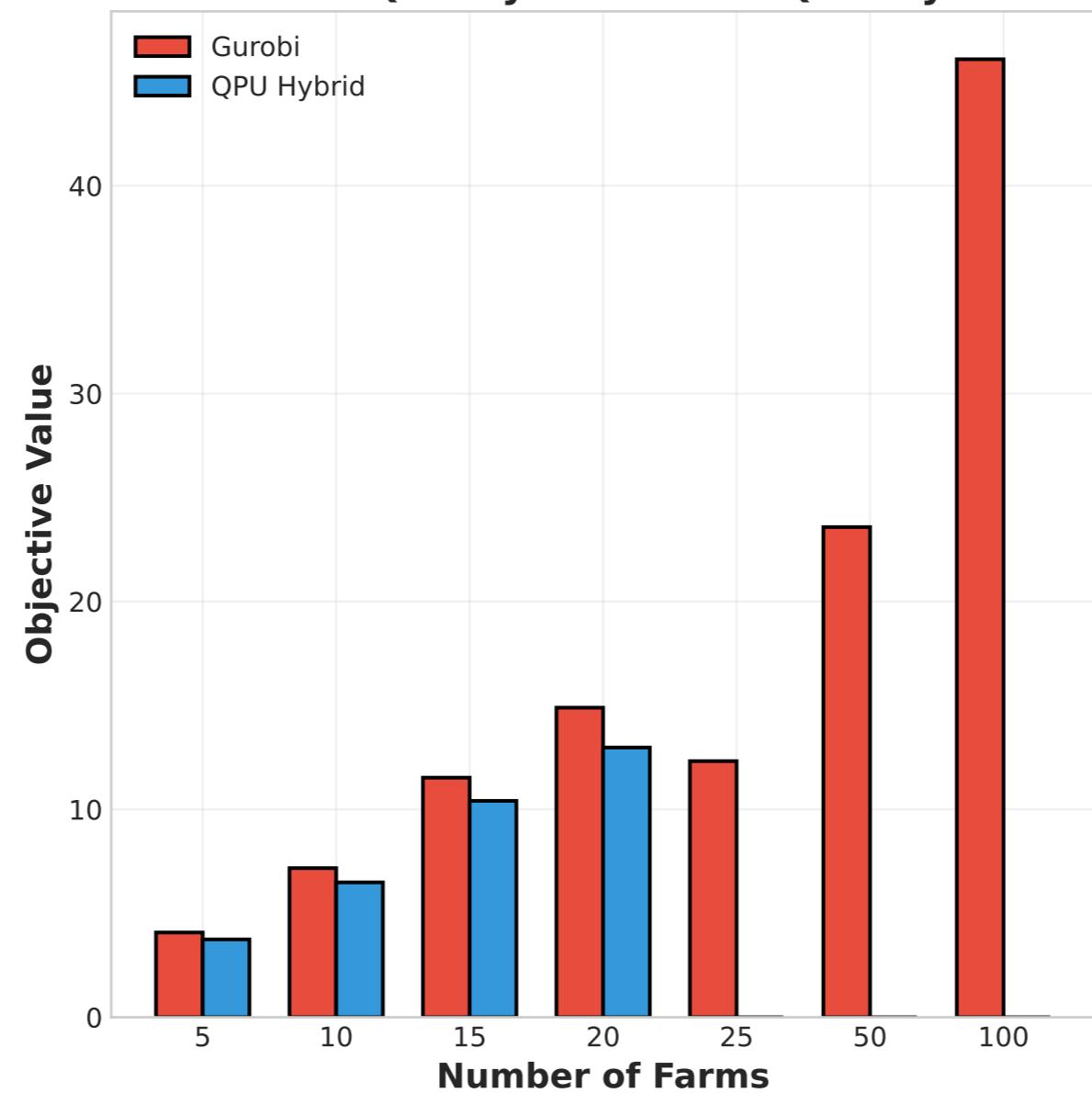
Comprehensive Gurobi vs QPU Hybrid Comparison

Significant Scenarios from Hardness Analysis

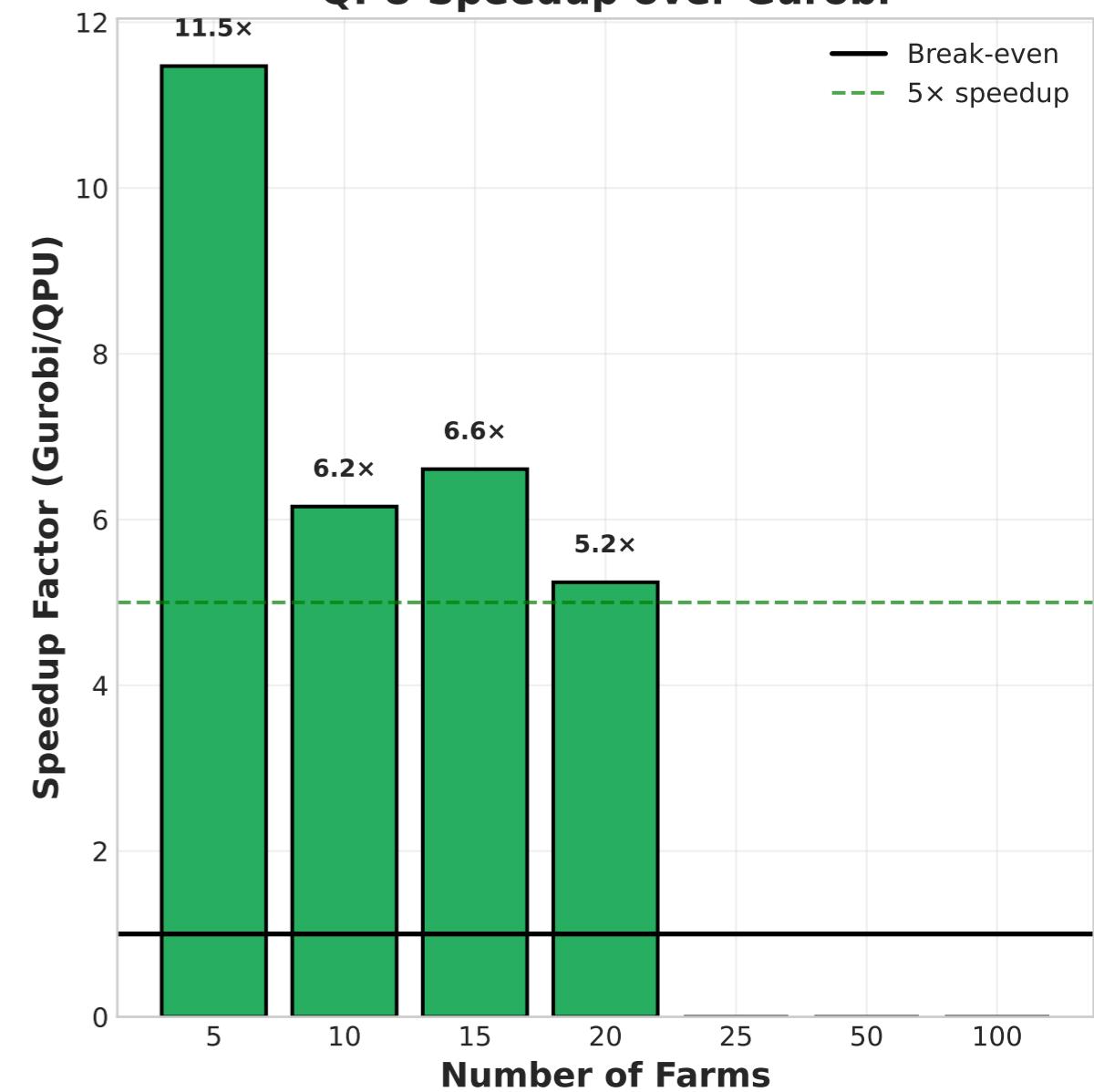
Solve Time: Gurobi vs QPU Hybrid



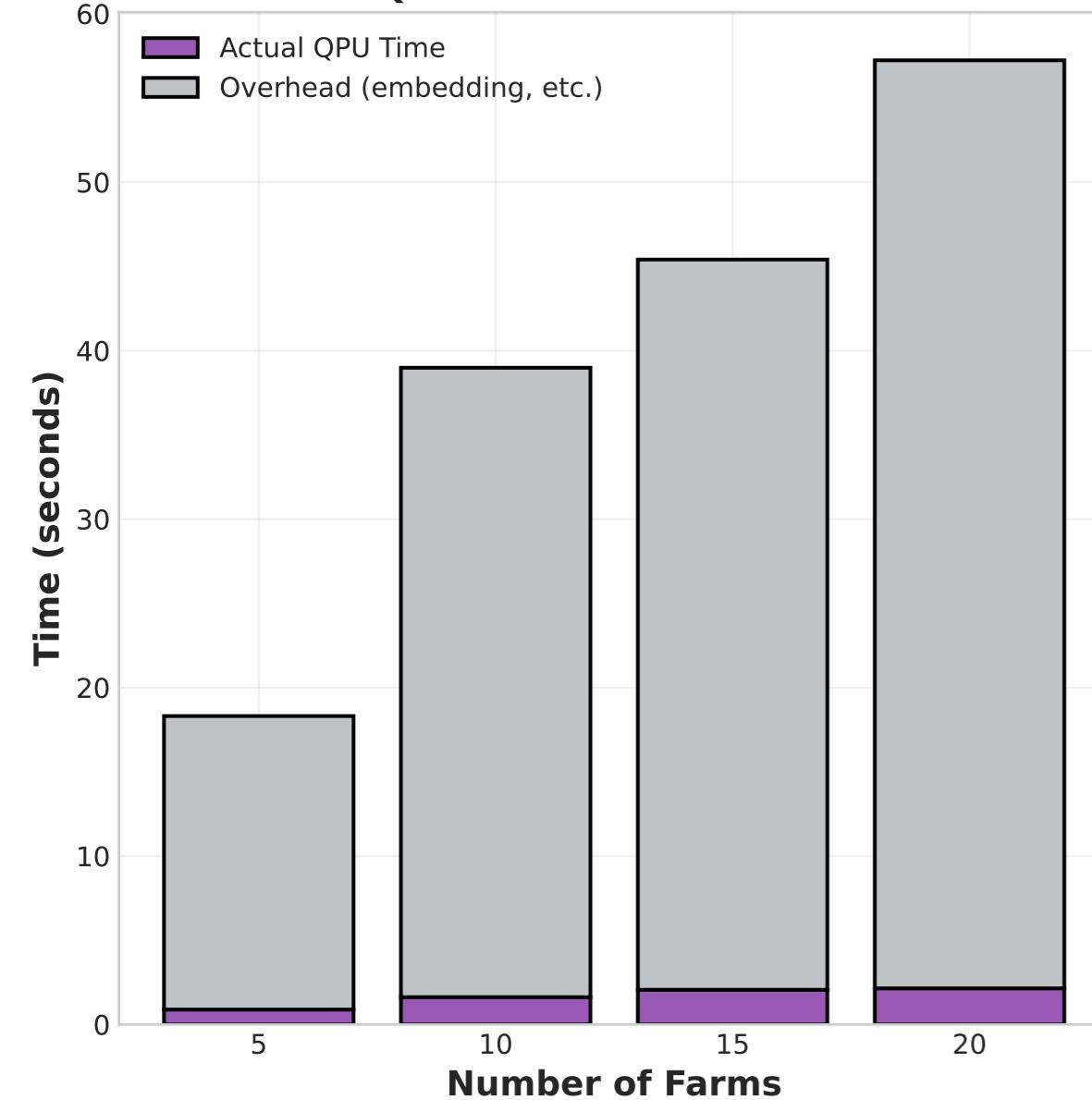
Solution Quality: Gurobi vs QPU Hybrid



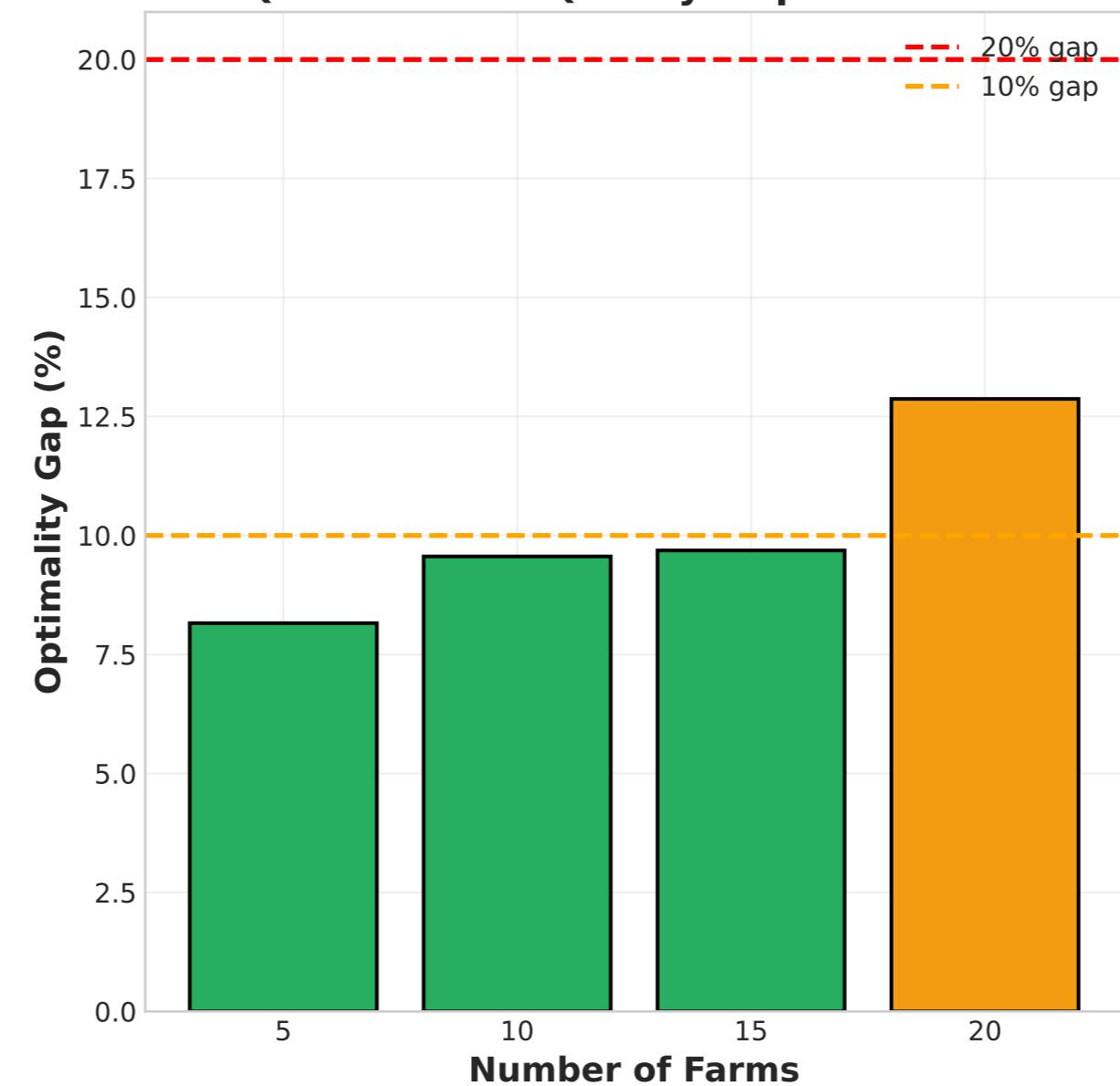
QPU Speedup over Gurobi



QPU Time Breakdown



QPU Solution Quality Gap vs Gurobi



GUROBI vs QPU PERFORMANCE SUMMARY

- SOLVE TIME (100s threshold):
 - Gurobi timeouts: 7/7 scenarios
 - QPU solves all within threshold
- SPEEDUP FACTORS:
 - Average speedup: 7.4x
 - Max speedup: 11.5x (at 5 farms)
- SOLUTION QUALITY:
 - Average gap: 10.1%
 - Max gap: 12.9%
 - Gaps < 20%: 4/7
- KEY INSIGHT:
 - QPU hybrid methods achieve 7x faster solutions with only 10% quality loss for problems Gurobi cannot solve in time.