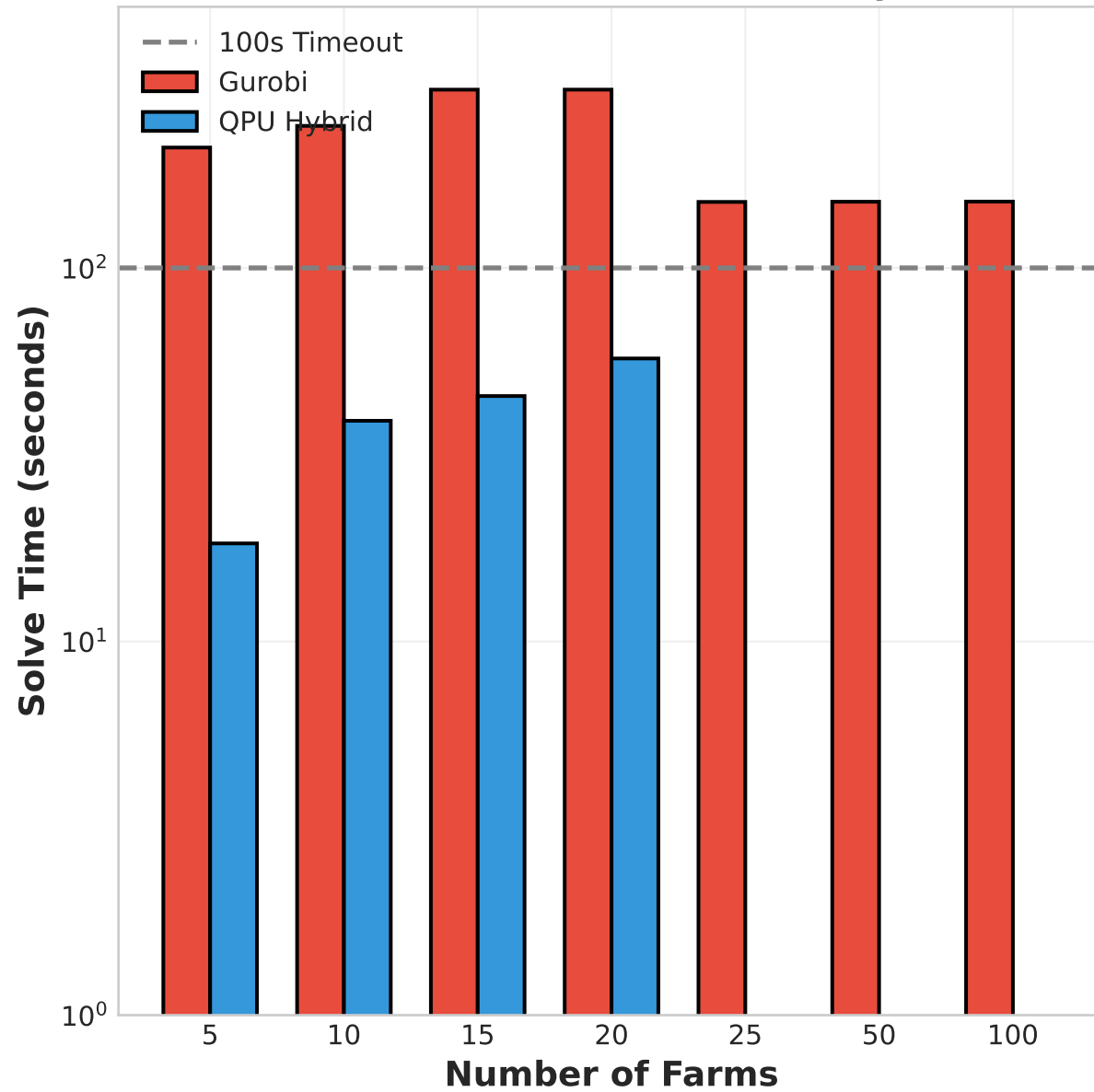


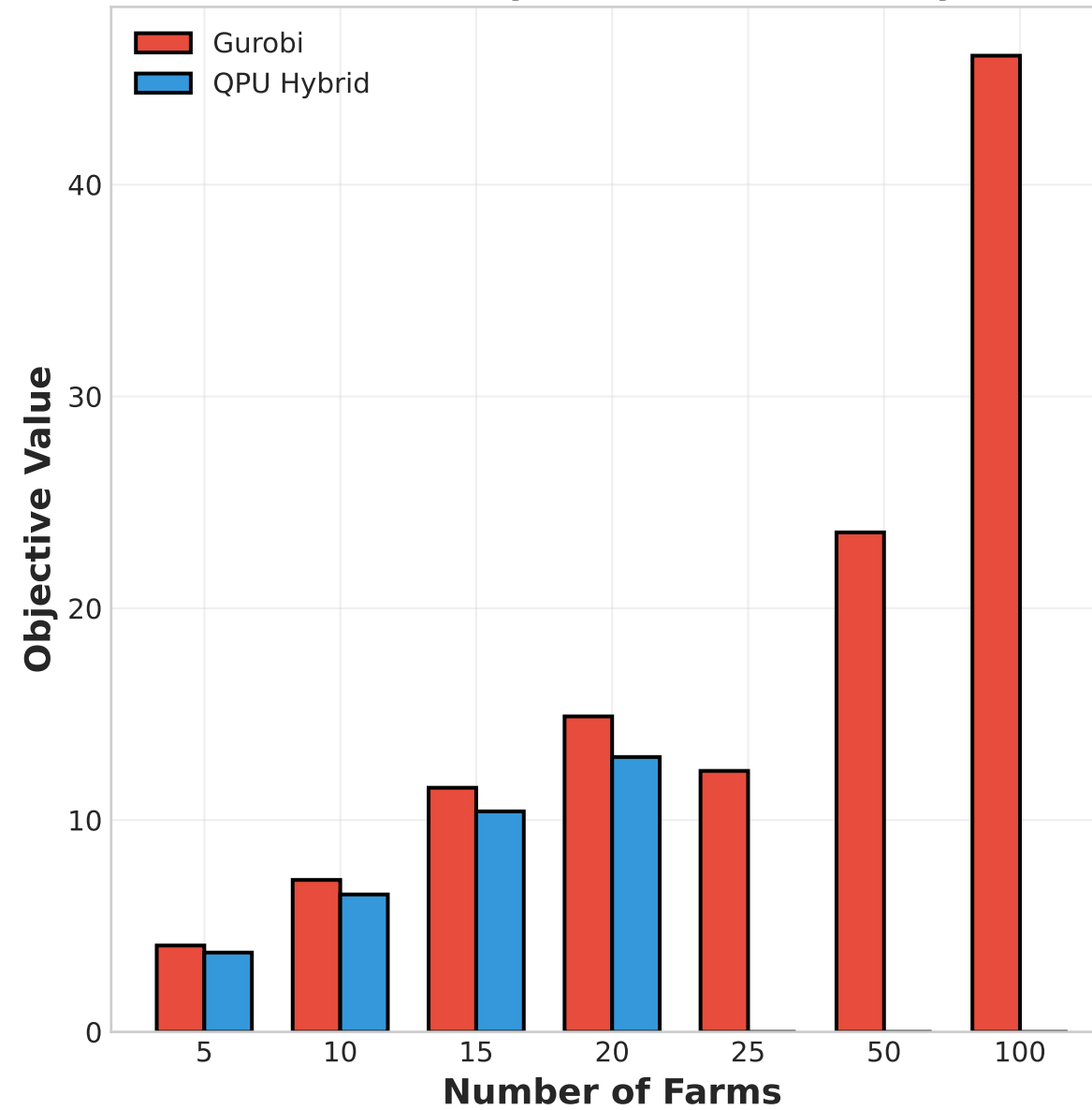
# Comprehensive Gurobi vs QPU Hybrid Comparison

## Significant Scenarios from Hardness Analysis

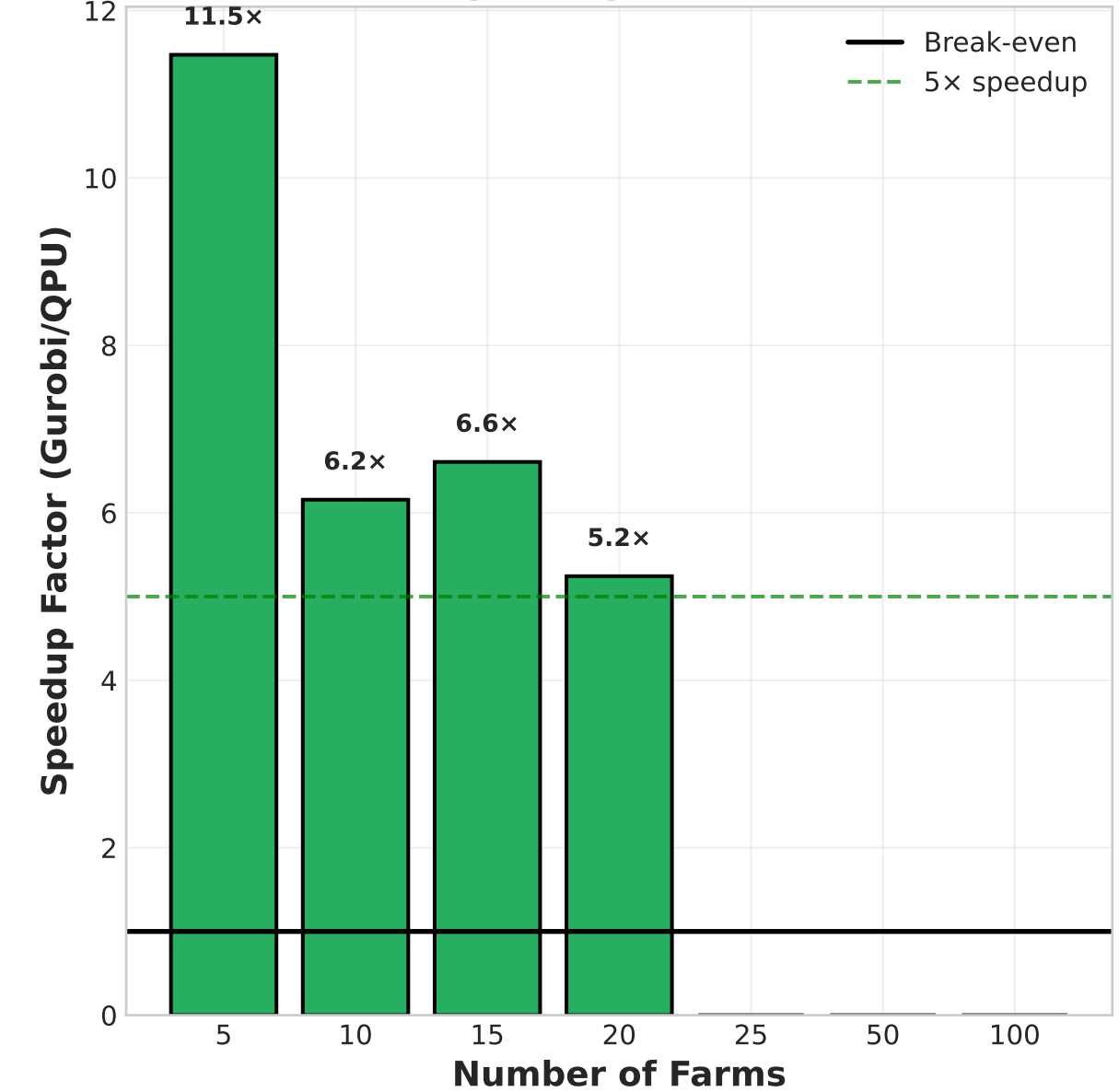
### Solve Time: Gurobi vs QPU Hybrid



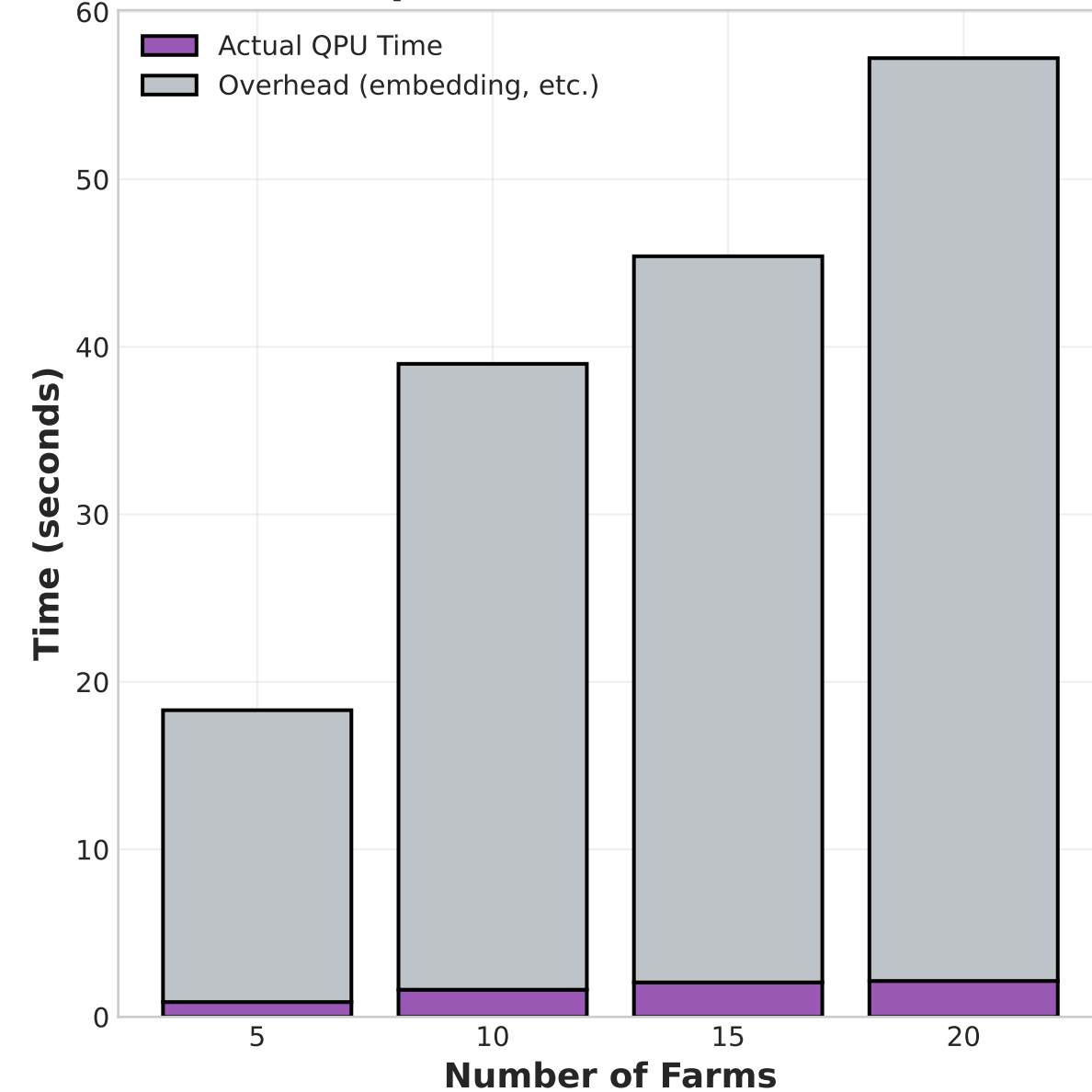
### Solution Quality: Gurobi vs QPU Hybrid



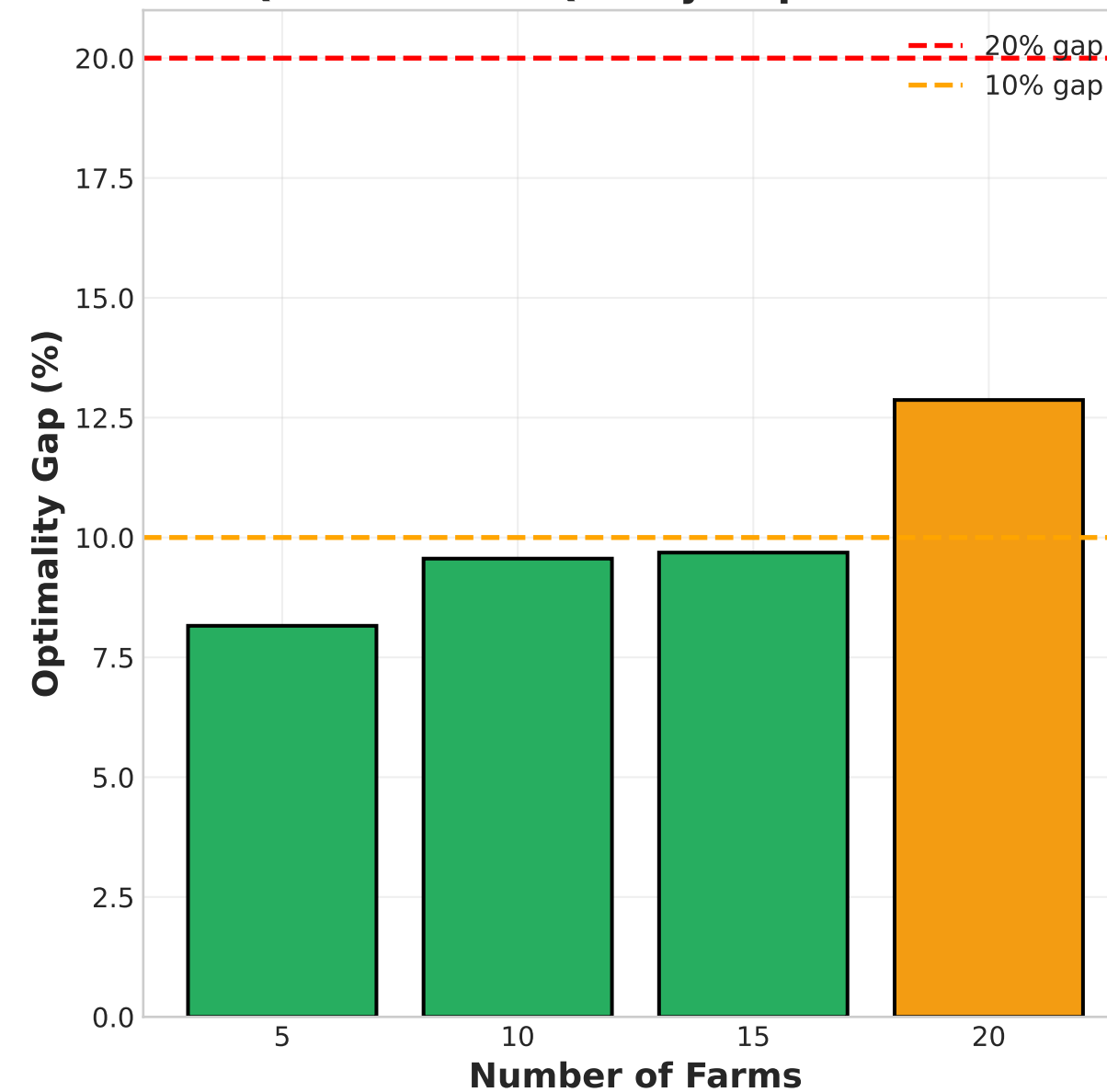
### QPU Speedup over Gurobi



### 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.	