In this paper, we examine the impact of pay-for-performance incentives on learning-by-doing. Exploiting personnel data on fruit pickers, we explore the role of performance-based pay on job-based learning under two distinct compensation contracts: a standard piece rate plan and a piece rate plan with an extra one-time bonus tied to output. Under the bonus contract, we observe bunching of performance just above the bonus threshold, suggesting workers distort their behavior in response to the discrete bonus. We also find that as workers gain experience, those subject to the bonus improve at a faster rate. Although they become more likely to reach the bonus threshold, we find performance improvements at all parts of the distribution, including well below the bonus threshold. In fact, the productivity gains throughout the performance distribution far outweigh the costs to the firm associated with the bunching distortions. Our results suggest that contract design has an important role to play in fostering learning on the job and underscores the importance of dynamic considerations in principal-agent models.