

## **Economic Profitability of Producing Tomato and Lettuce in Western Washington under Open-Field and High-Tunnel Production Systems<sup>©</sup>**

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Lettuce and tomato are popular warm-season, fresh market vegetable crops grown in western Washington and both are produced in open-field and high-tunnel production systems. The objectives of this study were to examine the economic feasibility of growing lettuce and tomato under both production systems by comparing their economic potential and identifying the main factors affecting profitability within each production system. Data for this study were collected through focus groups of experienced tomato and lettuce growers in western Washington. Costs of production varied by crop and production system. The findings indicated that it was five times more costly to grow lettuce and eight times more costly to grow tomato in a high-tunnel than in the open-field system in western Washington. Labor per square foot of growing area was found to be greater in a high-tunnel operation than in the open field. Total labor cost comprised more than 50% of the total production costs of lettuce and tomato in both the high-tunnel and open-field systems. As a percentage of total production cost, total labor cost was similar in both the high-tunnel and open-field production of lettuce, but higher in high-tunnel tomato production than in open-field tomato production. Tunnel-grown lettuce and tomato had three and four times greater marketable yield compared to field-grown, respectively. Given the base crop yield and average price, it was 43% more profitable to grow lettuce in the open-field than in the high-tunnel system, while in contrast, high-tunnel-grown tomato was three times more profitable than open-field tomato production.

