The effect of 5-10% CO₂ on the microbiological and physiological quality of minimally processed lettuce during 4 °C storage was investigated. It was found that 10% CO₂ was more effective than 5% CO₂ in decreasing microbial growth (total bacteria and yeast), retarding resting respiration, ascorbic acid loss and browning, and improving storage life to 3-4 days instead of 1 day at normal CO₂ atmosphere.